

**Aluminum Corporation of China**  
**Financial Statements with Auditors' Report**  
**For the Year of 2021**

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# 北京注册会计师协会

## 业务报告统一编码报备系统

业务报备统一编码:	110101362022596008726
报告名称:	中国铝业集团有限公司 2021 年度审计报告
报告文号:	XYZH/2022BJAA160988
被审(验)单位名称:	中国铝业集团有限公司
会计师事务所名称:	信永中和会计师事务所(特殊普通合伙)
业务类型:	财务报表审计
报告意见类型:	无保留意见
报告日期:	2022 年 04 月 28 日
报备日期:	2022 年 04 月 27 日
签字人员:	郭勇(410700010006), 董其彬(110101301565)
	
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## AUDITOR'S REPORT

XYZH/2022BJAA160988

### To Aluminum Corporation of China

#### 1. Opinion

We have audited the accompanying financial statements of Aluminum Corporation of China (the "Chinalco Group"), which comprise the consolidated and parent company's Balance sheet as at 31 December 2021, and the consolidated and parent company's Income statement of year 2021, the consolidated and parent company's Statement of changes in owners' equity and the consolidated and parent company's Cash flow statement for the year then ended and other explanatory notes.

In our opinion, the accompanying financial statements present fairly, in all material respects the consolidated financial position of Chinalco Group as of 31 December 2021, and its consolidated financial performance and its consolidated cash flows for the year then ended in accordance with Accounting Standards for Business Enterprises.

#### 2. Basis for Opinion

We conducted our audit in accordance with the Auditing Standards for Chinese Certified Public Accountants. Our responsibilities under those standards are further described in the "CPA's Responsibilities for the Audit of the Financial Statements" section of our report. We are independent of the Group in accordance with the ethical requirements that are relevant to our audit of the financial statements in the Chinese Institute of Certified Public Accountants' Code of Ethics for Professional Accountants, and we have fulfilled our other ethical responsibilities in accordance with these requirements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

#### 3. Responsibilities of Management and Those Charged with Governance for the Financial Statements

Management of Chinalco Group is responsible for the preparation of the financial statements in accordance with Accounting Standards for Business Enterprises to achieve fair presentation and design, implementation and maintenance of necessary internal control to enable the financial statements are free from material misstatement, whether due to fraud or error.

In preparing the financial statements, the Management is responsible for assessing the Chinalco Group's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Management either intends to liquidate the Chinalco Group or to cease operations, or have no realistic alternative but to do so.

Those charged with governance are responsible for overseeing the Chinalco Group's financial reporting process.

#### 4. Auditor's Responsibility for the Audit of the Financial Statements

Our objectives are to obtain reasonable assurance about whether the financial statements as a whole are free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with auditing standards will always detect a material misstatement when it exists. Misstatement can arise from fraud or error and are generally considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of these financial statements.

As part of an audit in accordance with China Standards on Auditing (CSA), we exercise professional judgment and maintain professional skepticism throughout the audit. We also:

- (1) Identify and assess the risks of material misstatement of the financial statements, whether due to fraud or error, design and perform audit procedures responsive to those risks, and obtain audit evidence that is sufficient and appropriate to provide a basis for our opinion. The risk of not detecting a material misstatement resulting from fraud is higher than for one resulting from error, as fraud may involve collusion, forgery, intentional omissions, misrepresentations, or the override of internal control.
- (2) Obtain an understanding of internal control relevant to the audit in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of internal control.

- (3) Evaluate the appropriateness of accounting policies used and the reasonableness of accounting estimates and related disclosures made by the Management.
- (4) Conclude on the appropriateness of the Management's use of the going concern basis of accounting and, based on the audit evidence obtained, whether a material uncertainty exists related to events or conditions that may cast significant doubt on the Chinalco Group's ability to continue as a going concern. If we conclude that a material uncertainty exists, we are required to draw attention in our auditor's report to the related disclosures in the financial statements or, if such disclosures are inadequate, we shall modify our opinion. Our conclusions are based on the audit evidence obtained up to the date of our auditor's report. However, future events or conditions may cause the Chinalco Group to cease to continue as a going concern.
- (5) Evaluate the overall presentation, structure and content of the financial statements, including the disclosures, and whether the financial statements represent the underlying transactions and events in a manner that achieves fair presentation.
- (6) Obtain sufficient and appropriate audit evidence on the financial information of entities or business activities of the Chinalco Group to express an audit opinion on the financial statements. We are responsible for the direction, supervision and performance of the group audit, and assume full responsibility for the audit opinion.

We communicate with those charged with governance regarding, among other matters, the planned scope and timing of the audit and significant audit findings, including any significant deficiencies in internal control that we identify during our audit.

ShineWing Certified Public Accountants



Beijing, China

Certified Public Accountant of China

董国程



Certified Public Accountant of China

董其林



28 April 2022

This auditor's report and the accompanying notes to the financial statements are simplified English translation of the Chinese auditor's report. In case of doubt as to the presentation of these documents, the Chinese version shall prevail.





# Consolidated Balance Sheet

For the year ended 31 December 2021

Prepared by: ALUMINUM CORPORATION OF CHINA

Currency: CNY

Items	Notes	Closing balance	Opening balance
<b>Current assets:</b>			
Monetary funds	8.1	72,739,401,873.98	48,788,585,996.72
△Settlement reserves			
△Loans to banks and other financial institutions			
Financial assets held for trading	8.2	1,444,199,191.97	1,154,110,504.25
☆Financial assets measured at fair values through profit or loss			
Derivative financial assets	8.3	410,450.00	20,997,596.76
Notes receivable	8.4	1,143,768,214.97	278,439,373.39
Accounts receivable	8.5	17,793,538,279.40	19,415,516,340.77
Receivables financing	8.6	4,147,989,866.30	6,962,157,229.60
Advances to suppliers	8.7	5,877,354,363.51	4,271,215,010.55
△Insurance Premium receivable			
△Reinsurance accounts receivable			
△Reinsurance reserves receivable			
Other receivables	8.8	6,564,388,173.77	9,337,879,092.80
Including: Dividends receivables	8.8	468,598,284.95	602,188,142.35
△Financial assets purchased under reverse repurchase agreements			
Inventories	8.9	48,734,464,626.24	51,687,975,986.20
Including: Raw materials	8.9	14,091,912,008.11	16,318,524,565.27
Merchandise (Finished goods)	8.9	10,826,467,620.26	11,361,502,233.72
Contract assets	8.10	7,269,059,694.84	7,672,015,691.91
Assets held for sale			
Non-current assets due within one year	8.11	5,426,996,283.18	3,517,933,999.93
Other current assets	8.12	3,913,952,858.96	7,708,681,732.04
<b>Total current assets</b>		<b>175,055,523,877.12</b>	<b>160,815,508,554.92</b>
<b>Non-current assets:</b>			
△Loans and advances		47,000,000.00	90,473,448.62
Debt investments			
☆Financial assets available-for-sale			
Other debt investments	8.13	5,585,987,150.00	5,156,004,130.00
☆Held-to-maturity investments			
Long-term receivables	8.14	5,358,526,119.43	6,171,881,857.17
Long-term equity investments	8.15	26,198,426,654.79	27,140,450,745.57
Other equity instrument investments	8.16	100,918,397,582.36	100,637,993,231.36
Other non-current financial assets	8.17	52,369,324.24	82,468,403.54
Investment properties	8.18	4,127,855,560.52	3,908,164,492.22
Fixed assets	8.19	191,956,466,073.64	205,171,246,558.49
Including: Cost	8.19	348,833,920,534.30	349,947,161,293.87
Accumulated depreciation	8.19	143,354,808,584.25	132,047,657,624.06
Provision for fixed assets impairment	8.19	17,208,674,493.70	16,808,518,747.40
Construction in progress	8.20	16,601,039,531.68	18,335,601,702.85
Bearer biological assets			
Oil and gas assets			
Right-of-use assets	8.21	2,669,954,134.44	3,311,059,665.19
Intangible assets	8.22	55,908,318,114.65	57,405,516,709.18
Development expenditures	8.23	73,194,948.06	194,251,430.74
Goodwill	8.24	11,353,143,210.43	11,374,160,062.33
Long-term prepaid expenses	8.25	1,658,676,089.47	1,806,872,178.69
Deferred tax assets	8.26	4,365,938,698.25	4,383,386,096.20
Other non-current assets	8.27	22,512,240,891.48	17,301,483,592.93
Including: Specifically reserved assets			
<b>Total non-current assets</b>		<b>449,387,534,083.44</b>	<b>462,471,014,305.08</b>
<b>Total assets</b>		<b>624,443,057,960.56</b>	<b>623,286,522,860.00</b>





## Consolidated Balance Sheet (continued)

For the year ended 31 December 2021

Prepared by: ALUMINUM CORPORATION OF CHINA

Currency: CNY

Items	Notes	Closing balance	Opening balance
<b>Current liabilities:</b>			
Short-term loans			
△ Borrowings from central bank	8.28	59,538,861,359.30	91,595,894,346.85
△ Loans from banks and other financial institutions			
△ Financial liabilities held for trading		1,000,000,000.00	650,000,000.00
☆ Financial liabilities measured at fair values through profit or loss	8.29	139,643,203.39	173,778,267.15
Derivative financial liabilities			
Note payables	8.31	63,179,097.36	503,481,037.72
Account payables	8.32	15,112,572,676.92	14,557,736,392.24
Advances from customers	8.33	36,282,651,935.48	38,188,418,088.35
Contract liabilities	8.34	224,189,145.29	234,655,562.56
△ Financial assets sold under repurchase agreements	8.35	7,773,100,603.02	6,308,058,208.27
△ Deposits from customers and interbank deposits	8.30	1,366,038,040.16	2,159,700,000.00
△ Funds from securities trading brokerage business		110,542,587.95	86,985,458.55
△ Funds from securities underwriting business			
Employee benefits payable			
Including: Salary payable	8.36	2,444,264,698.13	2,348,142,157.26
Welfare expense payable	8.36	598,187,330.54	519,011,571.04
#Including: Bonus and welfare fund	8.36	93,957,229.46	111,490,558.53
Tax and surcharge payable	8.37	4,585,696,038.72	2,720,902,236.35
Including: Tax payable	8.37	4,521,182,268.95	2,629,687,724.80
Other payables	8.38	14,580,808,363.71	16,658,185,877.95
Including: Dividends payable	8.38	791,847,226.30	1,219,019,645.19
△ Fees and commissions payable		14,584,985.86	15,314,413.22
△ Reinsurance accounts payable			
Liabilities held for sale			
Non-current liabilities due within one year	8.39	30,819,902,650.26	34,460,919,888.94
Other current liabilities	8.40	24,282,636,931.10	27,734,269,927.81
<b>Total current liabilities</b>		<b>198,338,672,316.65</b>	<b>238,396,442,763.22</b>
<b>Non-current liabilities:</b>			
△ Insurance contract reserves			
Long-term borrowings	8.41	136,900,446,816.66	115,883,033,931.67
Bonds payable	8.42	41,272,312,738.38	36,815,553,929.35
Including: Preference shares			
Perpetual debts			
Lease liabilities	8.43	1,897,525,363.63	1,449,036,111.49
Long-term payables	8.44	2,987,863,680.71	2,619,209,145.80
Long-term employee benefits payable	8.45	1,177,454,551.86	1,440,309,472.10
Provisions	8.46	4,943,197,074.52	3,693,863,888.06
Deferred income	8.47	551,677,704.33	681,113,943.81
Deferred tax liabilities	8.26	7,093,508,928.65	5,750,081,729.34
Other non-current liabilities	8.48	151,801,765.21	261,329,784.76
Including: Specifically reserved funds			
<b>Total non-current liabilities</b>		<b>196,975,788,623.95</b>	<b>168,593,531,936.38</b>
<b>Total liabilities</b>		<b>395,314,460,940.60</b>	<b>406,989,974,699.60</b>
<b>Owner's equity (or Shareholders' equity):</b>			
Paid-in capital (or share capital)			
State-owned capital	8.49	25,200,000,000.00	25,200,000,000.00
Capital from state-owned entities	8.49	25,200,000,000.00	25,200,000,000.00
Collective capital			
Private capital			
Foreign invested capital			
#Less: capital redemption			
Paid-in capital (or share capital), net	8.49	25,200,000,000.00	25,200,000,000.00
Other equity instruments	8.50	117,070,061,385.43	118,570,114,193.43
Including: Preference shares			
Perpetual debts			
Capital reserve	8.50	117,070,061,385.43	118,570,114,193.43
Less: Treasury shares	8.51	26,616,929,749.99	27,085,820,206.91
Other comprehensive income			
Including: Foreign currency translation difference	8.68	-17,352,579,609.71	-17,651,898,736.22
Special reserves	8.68	-10,726,591,571.89	-6,996,538,056.85
Surplus reserves	8.52	478,513,480.48	413,500,075.44
Including: Statutory surplus reserve	8.53	1,419,398,973.78	1,419,398,973.78
Discretionary surplus reserve	8.53	1,419,398,973.78	1,419,398,973.78
#Reserve fund			
#Enterprise development fund			
#Return for investment by profit			
△ General Risk Preparation			
Retained Earnings	8.54	563,320,874.41	555,812,147.09
<b>Total owners' equity (or shareholders' equity) attributable to the parent</b>		<b>102,674,182,303.33</b>	<b>97,392,582,929.76</b>
*Minority interests		126,454,414,716.63	118,903,965,230.64
<b>Total owners' (or shareholders') equity</b>		<b>229,128,597,019.96</b>	<b>216,296,548,160.40</b>
<b>Total liabilities and owners' (or shareholders') equity</b>		<b>624,443,057,960.56</b>	<b>623,286,522,860.00</b>

Page 13 to 196 in the Notes to Financial Statements are an integral part of these financial statements.

Page 1 to 12 of the Financial Statements are signed by the following persons:

Legal Representative:



Chief Financial Officer:

Head of Accounting Department:







# Consolidated Income Statement

Year of 2021

Prepared by: ALUMINUM CORPORATION OF CHINA

Currency: CNY

Items	Notes	Current Year	Prior Year
<b>1. Total Operating Revenue</b>			
Including: Revenue		<b>518,648,379,325.63</b>	<b>367,019,908,218.41</b>
△ Interest income	8.55	518,350,605,928.14	366,631,576,744.45
△ Premiums earned		266,459,132.54	362,040,832.93
△ Fee and commission income			
<b>2. Total Operating Costs</b>		31,314,264.95	26,290,641.03
Including: Cost of sales	8.55	<b>490,381,266,097.42</b>	<b>361,950,341,530.52</b>
△ Interest expenses		454,928,952,805.36	327,827,266,308.40
△ Service charge and commission fee		77,418,922.53	180,059,341.86
△ Surrender value		2,512,055.07	7,329,612.09
△ Net claims paid			
△ Net appropriation for insurance contracts reserves			
△ Dividend expenses for policyholders			
△ Reinsurance expenditures			
Taxes and surcharges			
Selling expenses		4,908,109,632.77	3,478,539,441.25
Administrative expenses	8.56	1,098,715,570.17	3,618,023,611.58
Research and development expenses	8.57	11,990,267,093.07	10,087,040,879.18
Financial expenses		5,356,431,646.11	3,468,672,090.88
Including: Interest expense	8.58	12,018,858,372.34	13,283,410,245.28
Interest income	8.58	11,440,190,444.88	13,060,803,191.57
Foreign exchange losses, net (gains expressed with "-")	8.58	520,980,279.83	1,095,531,367.89
Others	8.58	364,373,691.71	483,483,450.29
Add: Other income	8.59	363,782,816.77	373,301,818.91
Investment income (losses expressed with "-")	8.60	10,405,653,392.98	7,615,769,386.61
Including: Investment income from associates and joint ventures	8.60	123,110,877.86	380,141,819.19
Gains from derecognition of financial assets measured at amortized costs			
△ Foreign exchange gains (losses expressed with "-")			
Gains on hedge of a net position (losses expressed with "-")		-6,777,828.18	-26,801,570.10
Profit / (loss) from changes in fair value (losses expressed with "-")	8.61	-89,974,475.14	26,651,908.01
Credit impairment losses (losses expressed with "-")	8.62	-2,746,244,634.64	-1,908,110,123.49
Asset impairment losses (losses expressed with "-")	8.63	-9,173,522,702.92	-4,958,658,877.97
Gains on disposal of assets (losses expressed with "-")	8.64	479,813,002.14	140,082,476.36
<b>3. Operating profit (losses expressed with "-")</b>		<b>27,499,842,799.22</b>	<b>6,331,801,706.22</b>
Add: Non-operating income	8.65	974,926,271.01	868,449,368.81
Including: Government grants	8.65	619,264,856.16	293,492,149.47
Less: Non-operating expenses	8.66	2,170,330,140.63	966,022,526.29
<b>4. Total profits (total losses expressed with "-")</b>		<b>26,304,438,929.60</b>	<b>6,234,228,548.74</b>
Less: Income tax expenses	8.67	6,329,924,533.80	2,595,164,922.38
<b>5. Net profit (net losses expressed with "-")</b>		<b>19,974,514,395.80</b>	<b>3,639,063,626.36</b>
A. Classified by ownership			
Net profits attributable to owners of the Parent Company		9,023,440,245.70	1,972,108,433.57
*Minority interests		10,951,074,150.10	1,666,955,192.79
B. Classified by continuing and discontinued operations			
Net profit from continued operations			
Net profit from discontinued operations		19,974,514,395.80	3,639,063,626.36
<b>6. Other comprehensive income net of income tax</b>		<b>970,812,229.39</b>	<b>-10,087,545,985.96</b>
Attributable to owners of the parent	8.68	284,860,611.42	-8,892,482,255.59
A. Items that cannot be reclassified subsequently to profit or loss	8.68	3,730,208,149.76	-27,679,078.93
1. Remeasurement of defined benefit liability/(asset)	8.68	-3,730,194.45	-2,088,428.40
2. Other comprehensive income cannot be reclassified to profit or loss under equity method	8.68	2,830,561.79	-803,854.61
3. Change in fair value of other equity instruments	8.68	3,731,107,782.42	-24,786,795.92
4. Change in fair value of the enterprise's own credit risk			
5. Others			
B. Items that may be reclassified subsequently to profit or loss subsequently:	8.68	-3,445,347,538.34	-8,864,803,176.66
1. Other comprehensive income can be reclassified to profit or loss under equity method	8.68	-20,709,235.90	-632,787.25
2. Debt instrument measured at fair value through other comprehensive income - Changes in fair value	8.68	53,550,277.71	
☆3. Gains or losses on changes in fair value of available-for-sale financial	8.68		9,546,582.43
4. Other comprehensive income from reclassification of financial assets			
☆5. Gains or losses on reclassification of held-to-maturity investments to available-for-sale financial assets			
6. Debt instrument measured at fair value through other comprehensive income - Credit loss allowance	8.68	217,901.51	
7. The effective portion of gains or losses on cash flow hedges	8.68	251,647,033.38	-265,722,482.97
8. Foreign currency financial statements translation differences	8.68	-3,730,053,515.04	-8,607,994,488.87
9. Others	8.68		
*Attributable to non-controlling interests		685,951,617.97	-1,195,063,730.37
<b>7. Total comprehensive income:</b>		<b>20,945,326,625.19</b>	<b>-6,448,482,359.60</b>
Attributable to owners of the parent company		9,308,300,857.12	-6,920,373,822.02
*Attributable to minority interests		11,637,025,768.07	471,891,462.42
<b>8. Earnings per share</b>			
Basic earnings per share			
Diluted earnings per share			

Page 13 to 196 in the Notes to Financial Statements are an integral part of these financial statements.

Page 1 to 12 of the Financial Statements are signed by the following persons:

Legal Representative:



Chief Financial Officer:

Head of Accounting Department:







# Consolidated Cash Flow Statement

Year of 2021

Prepared by: ALUMINUM CORPORATION OF CHINA

Currency: CNY

Items	Notes	Current Year	Prior Year
<b>1. Cash flows from operating activities:</b>			
Cash received from the sale of goods or rendering of services		475,863,435,999.59	334,893,062,442.32
△Net increase in customer deposits and due to banks and other financial institutions		185,874,532.66	37,474,874.41
△Net increase in borrowings from the Central Bank			
△Net increase in borrowings from other financial institutions			
△Net cash received for insurance premium from original insurance contacts		350,000,000.00	-450,000,000.00
△Net cash received from reinsurance contracts			
△Net increase in deposits and investments from policyholders			
△Net increase in disposal of financial asset at fair value through profit or loss			
△Cash received for interest, fees and commissions			
△Net increase in borrowings from banks		158,982,584.42	247,971,752.95
△Net cash increase under repurchase agreements			
△Net increase received from securities trading brokerage business		-576,700,000.00	-570,779,687.53
Refunds of taxes and surcharges			
Other cash receipts relating to operating activities		930,313,782.75	1,590,737,502.43
<b>Sub-total of cash inflows from operating activities</b>		<b>16,179,546,407.74</b>	<b>22,712,909,107.29</b>
Cash paid for goods and services		493,091,453,307.16	358,461,375,991.87
△Net increase in loans and advances to customers		374,021,450,161.60	268,546,651,389.27
△Net increase in deposits in the central bank, and due from banks and other financial institutions		593,726,472.97	827,215,042.74
△Cash paid for claims in insurance contracts		145,968,638.58	-1,027,366,902.99
△Net increase in loans to banks and other financial institutions			
△Cash paid for interest, fees and commissions			-100,000,000.00
△Cash paid for dividends for policyholders		98,893,022.14	96,816,982.65
Cash paid to and on behalf of employees			
Cash paid for taxes and surcharges		24,391,536,275.05	23,569,593,464.66
Other cash payments relating to operating activities		18,934,827,110.51	12,408,188,410.94
<b>Sub-total of cash outflows from operating activities</b>		<b>22,465,408,901.98</b>	<b>23,432,504,085.00</b>
<b>Net cash flows from operating activities</b>		<b>440,651,810,582.83</b>	<b>327,753,602,472.27</b>
<b>2. Cash flows from investing activities:</b>	8.70	<b>52,439,642,724.33</b>	<b>30,707,773,519.60</b>
Cash received from disposal of investments		39,968,667,939.35	37,017,407,355.38
Cash received from investment income		10,772,885,178.01	6,492,821,407.63
Net cash received from disposal of fixed, intangible and other long-term assets		2,112,648,259.11	2,339,912,348.36
Net cash received from disposal of subsidiaries and other operational units		590,014,326.83	1,605,103,562.63
Other cash receipts relating to investing activities		3,212,470,892.48	6,285,972,648.57
<b>Sub-total of cash inflows from investing activities</b>		<b>56,656,686,595.78</b>	<b>53,741,217,322.57</b>
Cash paid for purchase and construction fixed, intangible and other long-term assets		16,034,332,574.31	21,228,015,852.69
Cash paid for acquisition of investments		33,882,098,107.71	35,692,684,480.98
△Net increase in mortgage loans			
Net cash paid for obtaining subsidiaries and other business unit		16,720,411.57	10,491,503.82
Other cash payments relating to investing activities		3,215,975,020.60	6,752,750,700.60
<b>Sub-total of cash outflows from investing activities</b>		<b>53,149,126,114.19</b>	<b>63,683,942,538.09</b>
<b>Net cash flows from investing activities</b>		<b>3,507,560,481.59</b>	<b>-9,942,725,215.52</b>
<b>3. Cash flows from financing activities:</b>			
Cash received from investments capital contributions		5,173,285,436.33	10,437,466,636.31
Including: Cash received from capital contributions from minority owners of subsidiaries		2,132,830,000.00	8,437,466,636.31
Cash received from borrowings		288,990,373,739.64	325,576,916,290.77
△Proceeds from issue of debt securities			
Other cash receipts relating to financing activities		4,394,920,715.60	10,539,180,137.64
<b>Sub-total of cash inflows from financing activities</b>		<b>298,558,579,891.57</b>	<b>346,553,563,064.72</b>
Cash repayments of borrowings		306,184,590,965.74	338,002,722,456.81
Cash payments for distribution of dividends or profits or settlement of interest expenses		17,068,148,867.41	19,598,464,810.16
Including: Subsidiaries' cash payments for distribution of dividends or profits to non-controlling shareholders		1,900,500,591.85	1,465,566,264.70
Other cash payments relating to financing activities		4,076,576,861.88	9,562,984,282.10
<b>Sub-total of cash outflows from financing activities</b>		<b>327,329,316,695.03</b>	<b>367,164,171,549.07</b>
<b>Net cash flows from financing activities</b>		<b>-28,770,736,803.46</b>	<b>-20,610,608,484.35</b>
<b>4. Effect of foreign exchange rate on cash and cash equivalents</b>		<b>-2,803,121,328.11</b>	<b>-1,912,199,296.06</b>
<b>5. Net increase in cash and cash equivalents</b>	8.70	<b>24,373,345,074.35</b>	<b>-1,757,759,476.33</b>
Add: Opening balance of cash and cash equivalents	8.70	43,585,266,544.07	45,343,026,020.40
<b>6. Closing balance of cash and cash equivalents</b>	8.70	<b>67,958,611,618.42</b>	<b>43,585,266,544.07</b>

Page 13 to 196 in the Notes to Financial Statements are an integral part of these financial statements.

Page 1 to 12 of the Financial Statements are signed by the following persons:

Legal Representative:



Chief Financial Officer:

Head of Accounting Department:





**Consolidated Statement of Changes in Owners' Equity**  
Year of 2021

Items	Current Year										Total owner's equity	
	Owner's equity attributable to owners of parent company											
	Paid-in capital (Share capital)	Preference shares	Other equity instruments	Capital reserves	Less: Treasury shares	Other comprehensive income	Special reserves	Surplus reserves	△General risk preparation	Retained earnings		Sub-total
I. Closing balance of prior year	25,200,000.00			27,085,820,266.91			413,500,075.44	1,419,398,973.78	555,812,147.09	105,397,251,025.99	118,286,300,897.92	226,658,612,023.91
Adj: Changes of accounting policies						-6,216,875,244.69			555,812,147.09	403,325,935.30	617,634,232.72	-10,357,883,853.51
Correction of prior period errors						-11,435,023,487.53				-10,974,998,096.23		
Others												
II. Opening balance of current year	25,200,000.00			27,085,820,266.91		-17,651,898,735.22	413,500,075.44	1,419,398,973.78	555,812,147.09	97,352,652,229.76	118,903,982,220.44	215,235,548,180.40
III. Changes in current year (decrease expressed with "-")				-465,890,456.92		289,243,125.51	85,013,405.04		7,508,727.32	6,878,701,379.82	7,850,449,485.99	12,832,640,893.96
(I) Total comprehensive income				-465,890,456.92		289,243,125.51	85,013,405.04		7,508,727.32	6,878,701,379.82	7,850,449,485.99	12,832,640,893.96
(II) Owners' contributions and reduction of capital				-465,890,456.92		289,243,125.51	85,013,405.04		7,508,727.32	6,878,701,379.82	7,850,449,485.99	12,832,640,893.96
1. Capital contribution from owners						289,243,125.51	85,013,405.04		7,508,727.32	6,878,701,379.82	7,850,449,485.99	12,832,640,893.96
2. Capital contributions from other equity instruments holders												
3. Share-based payments recognised in shareholders' equity												
4. Others												
(III) Extraction and use of special reserves				-465,890,456.92								
1. Appropriation of special reserves				-465,890,456.92								
2. Use of special reserves												
(IV) Profit Distribution												
1. Appropriation of surplus reserve												
Including: Statutory surplus												
Discretionary surplus reserve												
#Reserve fund												
#Enterprise expansion fund												
#Return investment by profit												
2. Appropriation of general risk preparation												
3. Profit distributed to owners (or shareholders)												
4. Others												
(V) Transfer within owners' equity												
1. Capitalization of capital reserve												
2. Capitalization of surplus reserve												
3. Loss offset by surplus reserves												
4. Transfer of changes in defined benefit plans to retained earnings												
5. Transfer of other comprehensive income to retained earnings												
6. Others												
IV. Closing balance of current year	25,200,000.00		117,070,081,386.43	26,616,930,748.99		-17,352,375,489.71	478,513,480.48	1,419,398,973.78	563,320,874.41	-51,321,462,851.05	104,674,182,303.33	229,228,937,019.98

Page 13 to 196 in the Notes to Financial Statements are an integral part of these financial statements.

Chief Financial Officer:

Head of Accounting Department:



*[Handwritten signature]*





## Consolidated Statement of Changes in Owners' Equity (Continued)

Year of 2021

Items	Prior Year											Total owner's equity				
	Paid-in Capital (Share capital)		Preference shares		Other equity instruments		Owner's equity attributable to owners of parent company			Less:			Minority interests			
							Capital reserves	Treasury stock	Other comprehensive income	Special reserves	Surplus reserves	△ General risk preparation		Retained earnings	Sub-total	
I. Closing balance of prior year	25,200,000,000.00				120,574,567,254.14		25,474,948,904.89		2,675,607,010.50	345,837,366.53	1,419,398,973.78	470,106,756.23	-55,215,641,880.45	120,944,826,396.02	116,336,048,523.91	236,280,874,918.93
Adj: Changes of accounting policies																
Correction of prior period errors																
Others																
II. Opening balance of current year	25,200,000,000.00				120,574,567,254.14		25,474,948,904.89		2,675,607,010.50	345,837,366.53	1,419,398,973.78	470,106,756.23	-55,215,641,880.45	120,944,826,396.02	116,336,048,523.91	236,280,874,918.93
III. Changes in current year (decrease expressed with "-")					-2,004,453,070.71		1,610,871,302.02		-8,892,482,256.59	67,662,708.91		85,703,391.86	-3,444,847,446.52	-12,577,545,359.03	2,950,282,574.01	-9,627,282,895.02
(i) Total comprehensive income									-8,892,482,256.59				1,972,105,433.57	-8,520,373,822.02	471,891,402.42	-6,448,482,359.60
(ii) Owners contributions and reduction of capital													-1,904,005,888.76	-2,397,587,657.45	5,271,325,614.21	2,973,737,956.76
1. Capital contribution from owners																
2. Capital contributions from other equity instruments holders																
3. Share-based payments recognised in shareholders' equity																
4. Others							1,610,871,302.02							-2,004,453,070.71		-2,004,453,070.71
(iii) Extraction and use of special reserves																
1. Appropriation of special reserves													-1,904,005,888.76			
2. Use of special reserves																
(iv) Profit Distribution																
1. Appropriation of surplus reserve																
Including: Statutory surplus																
Discretionary surplus reserve																
#Reserve fund																
#Enterprise expansion fund																
#Return investment by profit																
2. Appropriation of general risk preparation																
3. Profit distributed to owners (or shareholders)																
4. Others																
(v) Transfer within owners' equity																
1. Capitalization of capital reserve																
2. Capitalization of surplus reserve																
3. Loss offset by surplus reserves																
4. Transfer of changes in defined benefit plans to retained																
5. Transfer of other comprehensive income to retained earnings																
6. Others																
IV. Closing balance of current year	25,200,000,000.00				118,570,114,183.43		27,085,820,206.91		-5,215,975,244.69	413,500,075.44	1,419,398,973.78	555,812,147.09	-58,660,489,225.87	108,367,281,025.99	119,286,310,397.92	226,655,612,023.91

Page 13 to 196 in the Notes to Financial Statements are an integral part of these financial statements.

Chief Financial Officer:



/ [Signature]

Head of Accounting Department:





# Parent Company Balance Sheet

For the year ended 31 December 2021

Prepared by: ALUMINUM CORPORATION OF CHINA

Currency: CNY

Items	Notes	Closing balance	Opening balance
<b>Current assets:</b>			
Monetary funds			
△Settlement reserves		12,565,661,566.18	10,073,723,796.87
△Loans to banks and other financial institutions			
Financial assets held for trading			
☆Financial assets measured at fair values through profit or loss			
Derivative financial assets			
Notes receivable			
Accounts receivable			
Receivables financing			
Advances to suppliers		14,788.11	1,914,000.00
△Insurance Premium receivable			
△Reinsurance accounts receivable			
△Reinsurance reserves receivable			
Other receivables			
Including: Dividends receivables	12.1	1,032,819,077.59	1,463,564,760.02
	12.1	60,258,544.09	63,480,793.10
△Financial assets purchased under reverse repurchase agreements			
Inventories			
Including: Raw materials			
Merchandise (Finished goods)			
Contract assets			
Assets held for sale			
Non-current assets due within one year			
Other current assets			
<b>Total current assets</b>		<b>9,223,011,057.10</b>	<b>8,897,315,769.05</b>
		<b>22,821,506,488.98</b>	<b>20,436,518,325.94</b>
<b>Non-current assets:</b>			
△Loans and advances			
Debt investments			
☆Financial assets available-for-sale			
Other debt investments			
☆Held-to-maturity investments			
Long-term receivables			
Long-term equity investments	12.2	185,267,515,574.30	183,004,153,906.14
Other equity instrument investments		4,338,223,762.39	5,199,438,029.46
Other non-current financial assets			
Investment properties			
Fixed assets			
Including: Cost		44,161,506.38	7,635,878.52
Accumulated depreciation		61,765,769.40	23,877,662.89
Provision for fixed assets impairment		17,604,263.02	16,429,061.08
Construction in progress			
Bearer biological assets			
Oil and gas assets			
Right-of-use assets			
Intangible assets			
Development expenditures		3,581,267.40	40,488,118.51
Goodwill		10,065,681.35	121,811,019.46
Long-term prepaid expenses			
Deferred tax assets			
Other non-current assets			
Including: Specifically reserved assets		2,410,107.00	4,577,515.33
<b>Total non-current assets</b>		<b>189,665,957,898.82</b>	<b>188,378,104,467.42</b>
<b>Total assets</b>		<b>212,487,464,387.80</b>	<b>208,814,622,793.36</b>





## Parent Company Balance Sheet (continued)

For the year ended 31 December 2021

Prepared by: ALUMINUM CORPORATION OF CHINA

Currency: CNY

Items	Notes	Closing balance	Opening balance
<b>Current liabilities:</b>			
Short-term loans			
△ Borrowings from central bank		16,215,811,833.33	19,100,000,000.00
△ Loans from banks and other financial institutions			
△ Financial liabilities held for trading			
☆ Financial liabilities measured at fair values through profit or loss			
Derivative financial liabilities			
Note payables			
Account payables			
Advances from customers		9,371,935.07	6,811,024.55
Contract liabilities		4,000,000.00	66,468,913.36
△ Financial assets sold under repurchase agreements			
△ Deposits from customers and interbank deposits			
△ Funds from securities trading brokerage business			
△ Funds from securities underwriting business			
Employee benefits payable			
Including: Salary payable		41,534,009.69	35,846,473.12
Welfare expense payable		17,248,981.27	17,248,981.27
#Including: Bonus and welfare fund			
Tax and surcharge payable			
Including: Tax payable		4,797,525.24	9,138,035.98
Other payables		4,797,525.24	9,138,035.98
Including: Dividends payable		21,973,819,188.00	23,978,599,392.64
△ Fees and commissions payable		126,274,109.60	689,637,086.55
△ Reinsurance accounts payable			
Liabilities held for sale			
Non-current liabilities due within one year			
Other current liabilities		12,100,160,700.00	12,873,973,100.00
<b>Total current liabilities</b>		<b>12,000,000,000.00</b>	<b>13,000,000,000.00</b>
<b>Non-current liabilities:</b>			
△ Insurance contract reserves			
Long-term borrowings			
Bonds payable		43,340,685,362.73	31,460,033,800.07
Including: Preference shares		18,000,000,000.00	15,000,000,000.00
Perpetual debts			
Lease liabilities			
Long-term payables			
Long-term employee benefits payable			
Provisions			
Deferred income			
Deferred tax liabilities			
Other non-current liabilities			
Including: Specifically reserved funds			
<b>Total non-current liabilities</b>		<b>61,340,685,362.73</b>	<b>46,460,033,800.07</b>
<b>Total liabilities</b>		<b>123,690,180,554.06</b>	<b>115,530,870,739.72</b>
<b>Owner's equity (or Shareholders' equity):</b>			
Paid-in capital (or share capital)			
State-owned capital		25,200,000,000.00	25,200,000,000.00
Capital from state-owned entities		25,200,000,000.00	25,200,000,000.00
Collective capital			
Private capital			
Foreign invested capital			
#Less: capital redemption			
Paid-in capital (or share capital), net			
Other equity instruments		25,200,000,000.00	25,200,000,000.00
Including: Preference shares		117,070,061,385.43	118,570,114,193.43
Perpetual debts			
Capital reserve		117,070,061,385.43	118,570,114,193.43
Less: Treasury shares		4,140,867,821.63	3,955,459,491.13
Other comprehensive income			
Including: Foreign currency translation difference		1,385,004,676.39	2,250,300,351.79
Special reserves			
Surplus reserves		333,830.58	333,830.58
Including: Statutory surplus reserve			
Discretionary surplus reserve			
#Reserve fund			
#Enterprise development fund			
#Return for investment by profit			
△ General Risk Preparation			
Retained earnings		-58,998,983,880.29	-56,692,455,813.29
<b>Total owners' (or shareholders') equity</b>		<b>88,797,283,833.74</b>	<b>93,283,752,053.64</b>
<b>Total liabilities and owners' (or shareholders') equity</b>		<b>212,487,464,387.80</b>	<b>208,814,622,793.36</b>

Page 13 to 196 in the Notes to Financial Statements are an integral part of these financial statements.

Page 1 to 12 of the Financial Statements are signed by the following persons:

Legal Representative:



Chief Financial Officer:

Head of Accounting Department:







# Parent Company Income Statement

Year of 2021

Prepared by: ALUMINUM CORPORATION OF CHINA

Currency: CNY

Items	Notes	Current Year	Prior Year
<b>1. Total Operating Revenue</b>			
Including: Revenue		<b>259,350,196.79</b>	<b>227,599,546.13</b>
△Interest income	12.3	259,350,196.79	227,599,546.13
△Premiums earned			
△Fee and commission income			
<b>2. Total Operating Costs</b>			
Including: Cost of sales		<b>3,776,560,865.55</b>	<b>2,141,998,217.43</b>
△Interest expenses			
△Service charge and commission fee			
△Surrender value			
△Net claims paid			
△Net appropriation for insurance contracts reserves			
△Dividend expenses for policyholders			
△Reinsurance expenditures			
Taxes and surcharges			
Selling expenses		3,365,953.76	2,029,240.09
Administrative expenses			
Research and development expenses		256,868,104.75	172,653,714.63
Financial expenses		122,222,344.23	25,450,235.52
Including: Interest expense		3,394,104,462.81	1,941,865,027.19
Interest income		3,848,400,594.85	3,674,221,042.54
Foreign exchange losses, net (gains expressed with "-")		73,718,965.30	500,145,532.23
Others		-413,822,469.03	-1,295,855,215.01
Add: Other income			
Investment income (losses expressed with "-")		636,068.17	159,440,000.00
Including: Investment income from associates and joint ventures	12.4	3,199,550,366.68	1,382,083,803.48
Gains from derecognition of financial assets measured at amortized costs	12.4	13,596,170.27	17,319,039.52
△Foreign exchange gains (losses expressed with "-")			
Gains on hedge of a net position (losses expressed with "-")			
Profit / (loss) from changes in fair value (losses expressed with "-")			
Credit impairment losses (losses expressed with "-")		-9,799,200.04	
Asset impairment losses (losses expressed with "-")			
Gains on disposal of assets (losses expressed with "-")		-11,853,000.00	
<b>3. Operating profit (losses expressed with "-")</b>		<b>-338,676,433.95</b>	<b>-372,908,245.99</b>
Add: Non-operating income		3,139,324.01	230,395.58
Including: Government grants			
Less: Non-operating expenses		22,610,973.18	80,023,736.50
<b>4. Total profits (total losses expressed with "-")</b>		<b>-358,148,083.12</b>	<b>-452,701,586.91</b>
Less: Income tax expenses			
<b>5. Net profit (net losses expressed with "-")</b>		<b>-358,148,083.12</b>	<b>-452,701,586.91</b>
A. Classified by ownership			
Net profits attributable to owners of the Parent Company		-358,148,083.12	-452,701,586.91
*Minority interests			
B. Classified by continuing and discontinued operations			
Net profit from continued operations			
Net profit from discontinued operations			
<b>6. Other comprehensive income net of income tax</b>		<b>-865,295,675.40</b>	<b>-50,999,949.00</b>
Attributable to owners of the parent		-865,295,675.40	-50,999,949.00
A. Items that cannot be reclassified subsequently to profit or loss		-861,214,267.07	
1. Remeasurement of defined benefit liability/(asset)			
2. Other comprehensive income cannot be reclassified to profit or loss under equity method			
3. Change in fair value of other equity instruments			
4. Change in fair value of the enterprise's own credit risk		-861,214,267.07	
5. Others			
B. Items that may be reclassified subsequently to profit or loss subsequently:		-4,081,408.33	-50,999,949.00
1. Other comprehensive income can be reclassified to profit or loss under equity method			
2. Debt instrument measured at fair value through other comprehensive income - Changes in fair value			
☆3. Gains or losses on changes in fair value of available-for-sale financial			-50,999,949.00
4. Other comprehensive income from reclassification of financial assets			
☆5. Gains or losses on reclassification of held-to-maturity investments to available-for-sale financial assets			
6. Debt instrument measured at fair value through other comprehensive income - Credit loss allowance			
7. The effective portion of gains or losses on cash flow hedges			
8. Foreign currency financial statements translation differences		-4,081,408.33	
9. Others			
*Attributable to non-controlling interests			
<b>7. Total comprehensive income:</b>		<b>-1,223,443,758.52</b>	<b>-503,701,535.91</b>
Attributable to owners of the parent company		-1,223,443,758.52	-503,701,535.91
*Attributable to minority interests			
<b>8. Earnings per share</b>			
Basic earnings per share			
Diluted earnings per share			

Page 13 to 196 in the Notes to Financial Statements are an integral part of these financial statements.

Page 1 to 12 of the Financial Statements are signed by the following persons:

Legal Representative:



Chief Financial Officer:

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Head of Accounting Department:







# Parent Company Cash Flow Statement

Year of 2021

Prepared by: ALUMINUM CORPORATION OF CHINA

Currency: CNY

Items	Notes	Current Year	Prior Year
<b>1. Cash flows from operating activities:</b>			
Cash received from the sale of goods or rendering of services			
△Net increase in customer deposits and due to banks and other financial institutions			
△Net increase in borrowings from the Central Bank			
△Net increase in borrowings from other financial institutions			
△Net cash received for insurance premium from original insurance contacts			
△Net cash received from reinsurance contracts			
△Net increase in deposits and investments from policyholders			
△Net increase in disposal of financial asset at fair value through profit or loss			
△Cash received for interest, fees and commissions			
△Net increase in borrowings from banks			
△Net cash increase under repurchase agreements			
△Net increase received from securities trading brokerage business			
Refunds of taxes and surcharges			
Other cash receipts relating to operating activities		1,904,312,084	3,850,083,911
<b>Sub-total of cash inflows from operating activities</b>		<b>1,904,312,084.00</b>	<b>3,850,083,910.56</b>
Cash paid for goods and services		6,073,680	
△Net increase in loans and advances to customers			
△Net increase in deposits in the central bank, and due from banks and other financial institutions			
△Cash paid for claims in insurance contracts			
△Net increase in loans to banks and other financial institutions			
△Cash paid for interest, fees and commissions			
△Cash paid for dividends for policyholders			
Cash paid to and on behalf of employees		250,259,916	95,228,775
Cash paid for taxes and surcharges		15,026,815	6,454,746
Other cash payments relating to operating activities		241,326,435	1,019,356,362
<b>Sub-total of cash outflows from operating activities</b>		<b>512,686,846</b>	<b>1,121,039,883</b>
<b>Net cash flows from operating activities</b>	12.5	<b>1,391,625,238</b>	<b>2,729,044,028</b>
<b>2. Cash flows from investing activities:</b>			
Cash received from disposal of investments		1,169,155,228	4,301,107,566
Cash received from investment income		873,771,427	505,860,076
Net cash received from disposal of fixed, intangible and other long-term assets		-	25,392,331
Net cash received from disposal of subsidiaries and other operational units		-	-
Other cash receipts relating to investing activities		652,500	4,947,275,582
<b>Sub-total of cash inflows from investing activities</b>		<b>2,043,579,156</b>	<b>9,779,635,555</b>
Cash paid for purchase and construction fixed, intangible and other long-term assets		8,617,901	560,855,943
Cash paid for acquisition of investments		3,667,514,420	6,522,920,255
△Net increase in mortgage loans			
Net cash paid for obtaining subsidiaries and other business unit		20,330,000	
Other cash payments relating to investing activities		60,828,037	-
<b>Sub-total of cash outflows from investing activities</b>		<b>3,757,290,357</b>	<b>7,083,776,198</b>
<b>Net cash flows from investing activities</b>		<b>-1,713,711,201</b>	<b>2,695,859,357</b>
<b>3. Cash flows from financing activities:</b>			
Cash received from investments capital contributions			2,000,000,000
Including: Cash received from capital contributions from minority owners of subsidiaries			
Cash received from borrowings		66,400,000,000	60,100,000,000
△Proceeds from issue of debt securities			
Other cash receipts relating to financing activities			
<b>Sub-total of cash inflows from financing activities</b>		<b>66,400,000,000</b>	<b>62,100,000,000</b>
Cash repayments of borrowings		57,710,654,600	56,884,158,517
Cash payments for distribution of dividends or profits or settlement of interest expenses		5,724,841,546	7,283,479,819
Including: Subsidiaries' cash payments for distribution of dividends or profits to non-controlling shareholders			
Other cash payments relating to financing activities		34,471,184	4,123,720,703
<b>Sub-total of cash outflows from financing activities</b>		<b>63,469,967,330</b>	<b>68,291,359,039</b>
<b>Net cash flows from financing activities</b>		<b>2,930,032,670</b>	<b>-6,191,359,039</b>
<b>4. Effect of foreign exchange rate on cash and cash equivalents</b>		<b>-115,988,938</b>	<b>-344,011,540</b>
<b>5. Net increase in cash and cash equivalents</b>		<b>2,491,957,769</b>	<b>-1,110,467,194</b>
Add: Opening balance of cash and cash equivalents	12.5	10,067,723,797	11,178,190,991
<b>6. Closing balance of cash and cash equivalents</b>	12.5	<b>12,559,681,566</b>	<b>10,067,723,797</b>

Page 13 to 196 in the Notes to Financial Statements are an integral part of these financial statements.

Page 1 to 12 of the Financial Statements are signed by the following persons:

Legal Representative:



Chief Financial Officer:

Head of Accounting Department:





**Parent Company Statement of Changes in Owners' Equity**  
Year of 2021

Currency: CNY

Items	Paid-in Capital (Share capital)		Other equity instruments		Owner's equity attributable to owners of parent company		Retained earnings	Sub-total	Total owners' equity
	Preference shares	Perpetual debits	Others	Capital reserves	Less: Treasury shares	Other comprehensive income			
I. Closing balance of prior year	25,200,000,000.00	118,570,114,193.43		3,955,459,491.13		324,444,724.33	73,640,136.93	91,284,256,289.25	91,284,256,289.25
Adj: Changes of accounting policies						1,925,855,627.46		1,999,495,764.39	1,999,495,764.39
Correction of prior period errors									
Others									
II. Opening balance of current year	25,200,000,000.00	118,570,114,193.43		3,955,459,491.13		2,250,300,351.79		93,283,752,053.64	93,283,752,053.64
III. Changes in current year (decrease expressed with "-")									
(i) Total comprehensive income		-1,500,052,808.00		185,408,330.50		-865,295,675.40		-4,486,468,219.90	-4,486,468,219.90
(ii) Owners contributions and reduction of capital:									
1. Capital contribution from owners		-1,500,052,808.00		185,408,330.50		-865,295,675.40		-358,148,093.12	-1,223,443,758.52
2. Capital contributions from other equity instruments holders									
3. Share-based payments recognised in shareholders' equity									
4. Others									
(iii) Extraction and use of special reserves									
1. Appropriation of special reserves									
2. Use of special reserves									
(iv) Profit Distribution									
1. Appropriation of surplus reserve									
Including: Statutory surplus									
Discretionary surplus reserve									
#Reserve fund									
#Enterprise expansion fund									
#Return investment by profit									
2. Appropriation of general risk preparation									
3. Profit distributed to owners (or shareholders)									
4. Others									
(v) Transfer within owners' equity									
1. Capitalization of capital reserve									
2. Capitalization of surplus reserve									
3. Loss offset by surplus reserves									
4. Transfer of changes in defined benefit plans to retained earnings									
5. Transfer of other comprehensive income to retained earnings									
6. Others									
IV. Closing balance of current year	25,200,000,000.00	117,070,061,385.43		4,140,867,821.63		1,385,004,676.39	-58,998,983,880.23	88,797,283,833.74	88,797,283,833.74

Page 13 to 196 in the Notes to Financial Statements are an integral part of these financial statements.

Chief Financial Officer:

Head of Accounting Department:



*(Handwritten signature)*



**Parent Company Statement of Changes in Owners' Equity (Continued)**  
Year of 2021

Items	Prior Year										Total owner's equity	
	Paid-in Capital (Share capital)	Preference shares	Perpetual debits	Others	Capital reserves	Treasury shares	Other comprehensive income	Special reserves	Surplus reserves	ΔGeneral risk preparation		Retained earnings
I. Closing balance of prior year	25,200,000,000.00		120,574,567,264.14		3,439,784,901.19		375,444,673.33	333,930.58			-52,886,147,764.84	96,703,982,904.40
Add: Changes of accounting policies												
Correction of prior period errors												
Others												
II. Opening balance of current year	25,200,000,000.00		120,574,567,264.14		3,439,784,901.19		375,444,673.33	333,930.58			-52,886,147,764.84	96,703,982,904.40
III. Changes in current year (decrease expressed with "-")			-2,004,453,070.71		515,674,589.94		-50,999,949.00				-3,879,948,185.38	-5,419,726,615.15
(I) Total comprehensive income												
(II) Owners contributions and reduction of capital												
1. Capital contribution from owners												
2. Capital contributions from other equity instruments holders												
3. Share-based payments recognised in shareholders' equity												
4. Others												
(III) Extraction and use of special reserves												
1. Appropriation of special reserves												
2. Use of special reserves												
(IV) Profit Distribution												
1. Appropriation of surplus reserve												
Including: Statutory surplus												
Discretionary surplus reserve												
#Reserve fund												
#Enterprise expansion fund												
#Return investment by profit												
2. Appropriation of general risk preparation												
3. Profit distributed to owners (or shareholders)												
4. Others												
(V) Transfer within owners' equity												
1. Capitalization of capital reserve												
2. Capitalization of surplus reserve												
3. Loss offset by surplus reserves												
4. Transfer of changes in defined benefit plans to retained earnings												
5. Transfer of other comprehensive income to retained earnings												
6. Others												
IV. Closing balance of current year	25,200,000,000.00		118,570,114,193.43		3,955,459,491.13		324,444,724.33	333,930.69			-56,766,095,950.22	91,284,256,289.25

Page 1 to 12 of the Financial Statements are signed by the following persons:



Legal Representative:

*[Handwritten Signature]*

Head of Accounting Department:





## **Aluminum Corporation of China**

### **Notes to the financial statements for the year ended 31 December 2021**

#### **Note 1 Basic Information About the Company**

Aluminum Corporation of China (Chinalco) (hereinafter referred to as "the Company" or "company") is a state-owned enterprise established in Beijing in 2001, approved by "The approval on Related Issues about the Formation of Aluminum Corporation of China by the State Council" (Guo Han [2001] No.12) and "Notice on Issuance of 'Aluminum Corporation of China Formation Plan' and 'Aluminum Corporation of China Regulation'" (Guo Jing Qi Gai [2001] No. 146).

The Company was set up on the basis of several stated-owned aluminum enterprises under the central government. The establishment of the Group mainly included 8 aluminum enterprises (Shandong Aluminum Company, China Great Wall Aluminum Co., Ltd, Aluminum Corporation of China Guizhou Aluminum Plant, Aluminum Corporation of China Shanxi Aluminum Plant, Pingguo Aluminum Company, China Great Wall Aluminum Zhongzhou Aluminum Plant, Qinghai Aluminum Industry Co., Ltd and Shanxi Carbon Factory), 2 construction companies (The Sixth Metallurgical Construction Company of China National Nonferrous Metals Industry and the Twelfth Metallurgical Construction Company of China National Nonferrous Metals Industry), and 2 R&D units (Zhengzhou Light Metal Research Institute and Luoyang Nonferrous Metal Fabrication Design and Research Institute).

In 2017, according to the approval of the state-owned Assets Reform [2017] No. 1172, the Company implemented a restructuring of the enterprises under the ownership of the whole people. After the restructuring, the type was a limited liability company (state-owned), and the registered capital after the restructuring was RMB 25,200,000,000.00.

In 2019, upon the approval of the State-owned Assets Supervision and Administration Commission of the State Council (hereinafter referred to as "SASAC"), the 10% state-owned equity of the Company after audited was transferred to the National Council for Social Security Fund on 31 December 2018 as the transfer base date.

The unified social credit code of the Company is 911100007109279199. The registered capital is RMB 25,200,000,000.00. The legal representative of the Company is Yao Lin. The registered address of the headquarters is in the 18th, 22nd, and 28th floors, No. 62, Xizhimen North Street, Haidian District, Beijing. The Company's business period is from 6 December 2017 to no fixed term. The Company and all its subsidiaries are collectively referred to as the "Group".

The Group's business scope includes: bauxite mining (limited to the mining of Chinalco Guizhou Maochang Bauxite Mine, valid until 30 December 2038); dispatch labor to undertake foreign projects suitable for its strength, scale and performance; the operating and management of state-owned assets and state-owned equity; aluminum, copper, rare earth and related nonferrous metal mine products, smelting products, processing products and carbon products production and sale; production, exploration design, engineer construction EPC and construction and installation; equipment manufacture; technology development and technology service; import and export business. (The Company shall independently choose business projects and carry out business activities according to law; projects that must be approved according to law, business activities shall be carried out in accordance with the approved contents after being approved by relevant departments; the Company shall not engage in business activities of projects prohibited or restricted by this municipality's industrial policies.)

The Group's investor and the ultimate controlling party are State-owned Assets Supervision and Administration Commission (SASAC).

#### **Note 2 Basis of Preparation of Financial Statements**

The financial statements of the Group have been prepared on going concern basis, according to the actual transactions and events, in accordance with Accounting Standards for Business Enterprises and supplementary regulations issued and revised by the Ministry of Finance, and based on the accounting policies and estimates described in Note 4 "Significant Accounting Policies and Accounting Estimates"

#### **Note 3 Compliance with Accounting Standards for Business Enterprises**

The financial statements of the Group conform to the requirements of the accounting standards for business enterprises, which truthfully and completely reflect the financial position of the Group as of 31 December 2021 and the financial performance and cash flows of the Group for year 2021.

1 January 2021 to 31 December 2021

(Unless otherwise specified, the notes to the financial statements are all presented in RMB)

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## **Note 4 Significant Accounting Policies and Accounting Estimates**

### **4.1 Financial year**

The financial year of the Group is calendar year from 1 January to 31 December.

### **4.2 Functional currency**

Renminbi ("RMB") is the currency of the primary economic environment in which the Company and its domestic subsidiaries operate. Therefore, the Company and its domestic subsidiaries adopt RMB as their functional currency. The overseas subsidiaries of the Company determine their functional currency based on the currency of the primary economic environment. The Group's presentation currency is RMB.

### **4.3 Basis of accounting and principle of measurement**

According to Accounting Standards for Business Enterprises, the financial statements of the Group are prepared using the accrual basis. Except for certain financial instruments, the financial statements use historical cost method. If an asset is impaired, the Group recognizes an impairment loss according to relevant accounting standards.

### **4.4 Business combination**

As the merging party, the assets and liabilities obtained in a business combination under the same control of the Group are measured at the book value of the combined party in the consolidated statement of the ultimate controlling party on the combining date. The difference between the book value of the acquired net assets and the book value of the combined consideration paid shall be adjusted to the capital reserve; if the capital reserve is insufficient to offset, the retained earnings shall be adjusted.

The identifiable assets, liabilities and contingent liabilities of the acquiree acquired in a business combination not under the same control are measured at their fair value on the acquisition date. The merger cost contains the fair value of the cash or non-cash assets, issued or assumed liabilities, the fair value of the equity securities issued and the sum of various direct related expenses incurred in the business combination (in a business combination realized through multiple transactions, the combination cost is the sum of the costs of each single transaction). The difference between the merger cost and the fair value of the acquiree's identifiable net assets obtained in the merger is recognized as goodwill; if the merger cost is less than the fair value of the acquiree's identifiable net assets acquired in the merger, first review the fair value of the identifiable assets, liabilities and contingent liabilities obtained in the merger, as well as the fair value of the non-cash assets or equity securities issued for the merger consideration. After the review, if the merger cost is still less than the fair value of the identifiable net assets of the acquiree obtained in the merger, the difference shall be included in the current non-operating income of the merger.

### **4.5 Preparation of consolidated financial statements**

#### **1. Scope of the consolidation**

The Group includes all controlled subsidiaries and structured entities into the scope of consolidated financial statements.

#### **2. Preparation of consolidated financial statements**

If a subsidiary uses accounting policies or reporting period other than those adopted by the Group, appropriate adjustments are made to those subsidiaries' financial statements in preparing the consolidated financial statements.

All significant intragroup balances, transactions and unrealized profits are eliminated upon consolidation. The share of the owner's equity of the subsidiary that does not belong to the parent company and the share of the current net profit and loss, other comprehensive income and total comprehensive income that belongs to minority shareholders' equity are respectively listed in the item "minority shareholders' equity, minority shareholders' profit and loss, other comprehensive income belonging to minority shareholders and total comprehensive income belonging to minority shareholders" in the consolidated financial statements.

For a subsidiary acquired through a business combination under common control, its financial performance and cash flows, from the beginning of the period when the combination occurs to date of combination, are appropriately presented in the consolidated statement of comprehensive income and consolidated statement of cash flows; the comparative information in the statement of financial position shall be adjusted at the same time. When preparing the comparative consolidated financial statements, the relevant items of the financial statements of the previous year are adjusted, which is deemed as the reporting entity formed after the merger has existed since the time when the ultimate controller began to control.

## ALUMINUM CORPORATION OF CHINA (Consolidated) Notes to the financial statements for the year of 2021

1 January 2021 to 31 December 2021

(Unless otherwise specified, the notes to the financial statements are all presented in RMB)

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If the equity of the investee under the same control is obtained through multiple transactions, and finally form business combination, the treatment method in the consolidated financial statement shall be supplementally disclosed during the reporting period when the control is obtained. For example: Acquire the equity of an investee under the same control through multiple transactions, and finally form a business combination. When preparing the comparative statement, within the time limit when the Group and the combined party are both under the control of the ultimate controlling party, the related assets and liabilities of the combined party shall be incorporated into the comparative statement of the consolidated financial statements of the Group. For the net assets increased due to the merger, adjust the corresponding items under the owner's equity in the comparative statement. In order to avoid double counting the value of the net assets of the merged party, for the long-term equity investment held by the Group before the merger is reached, first determine the later of the following two (a) the date of acquiring the original equity (b) the day when the Group and the merged party are in the ultimate control of the same party. Then, from the later date to the consolidation date, the relevant gains and losses, other comprehensive income and other net asset changes are used to offset the initial retained earnings and current gains and losses during the comparative reporting period.

For subsidiaries acquired in a business combination not under the same control, operating results and cash flows shall be included in the consolidated financial statements from the day when the Group obtains control. When preparing consolidated financial statements, the financial statements of subsidiaries are adjusted based on the fair value of the identifiable assets, liabilities and contingent liabilities determined on the purchase date.

To obtain equity of investees under different control through multiple transactions, and finally form a business combination, the treatment method in the consolidated financial statements shall be supplementally disclosed during the reporting period when the control is obtained. For example: in the case of acquiring equity of an investee under the same control through multiple transactions and finally forming a business combination, when preparing a consolidated statement, the equity of the acquiree held before the purchase date should be remeasured in accordance with the fair value of the equity. And the difference between the fair value and its book value is included in the current investment income. The equity of the purchased party held before the purchase date, involving other comprehensive income calculated by the equity method and other changes in owner's equity except net profit and loss, other comprehensive income and profit distribution, shall be converted to investment profit and loss in the current period of the purchase date. Except for other comprehensive income arising from changes in net liabilities or net assets of the investee's re-measurement of the defined benefit plan.

If the Group partially disposal equity investments without losing control, the difference between the sum of fair value of the consideration received from the disposal of equity investments plus fair value of any investment retained, and the Group's previous pro rata share in the former subsidiary's net assets calculated since acquisition date, shall be used to adjust the capital premium or equity premium, if the capital reserve is insufficient to offset, the retained earnings shall be adjusted.

If the Group loses control of a subsidiary due to partial disposal of equity investments or other reasons, the Group recognizes any investment retained in the former subsidiary at its fair value on the date that control is lost. Excess of the sum of fair value of the consideration received from the disposal of equity investments and fair value of any investment retained, over the Group's previous pro rata share in the former subsidiary's net assets calculated since acquisition date, shall be recognized in investment income in the period when control is lost and offset goodwill. Other comprehensive income related to the equity investment of the original subsidiary shall be transferred into investment profit and loss in the period of which the right of control is lost.

Under circumstances that the group disposes of equity investment in a subsidiary through multiple transactions step by step until it loses control, if the disposal of equity investment in a subsidiary until the loss of control is treated as a package transaction, accounting for each transaction will be treated as a single transaction of disposal of the subsidiary and losing control. However, before the loss of control, the difference between each disposal price and the net asset share of the subsidiary corresponding to the disposal investment is recognized as other comprehensive income in the consolidated financial statements, and transferred to the investment profit and loss of the current period when the control right is lost.

## ALUMINUM CORPORATION OF CHINA (Consolidated) Notes to the financial statements for the year of 2021

1 January 2021 to 31 December 2021

(Unless otherwise specified, the notes to the financial statements are all presented in RMB)

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### 4.6 Classifications of joint venture arrangements and accounting treatment of joint operations

The joint venture arrangement of the Group includes joint operation and joint venture. For joint operation projects, the Group, as the joint venture party in joint operation, recognizes the assets held and liabilities undertaken separately, and the assets held and liabilities undertaken by shares, and recognizes the relevant income and expenses separately or by shares according to relevant agreements. Where the purchase or sale of assets does not constitute a business with the joint operation, only the part of the profits and losses arising from the transaction attributable to other participants in the joint operation shall be recognized.

### 4.7 The determine criteria of cash and cash equivalents

Cash comprises cash on hand and deposits that can be readily withdrawn on demand. Cash equivalents are short-term (usually due within 3 months from the acquisition date), highly liquid investments that are readily convertible to known amounts of cash and which are subject to a significant risk of changes in value.

### 4.8 Foreign currency transactions and translation to the presentation currency

#### 1. Foreign currency transactions

The Group's foreign currency transactions convert foreign currency amounts into RMB based on the spot exchange rate on the transaction date. At the balance sheet date, foreign currency monetary items shall be translated by applying the spot exchange rate at the balance sheet date. The difference between the translated functional currency amount and the original functional currency amount (changes of exchange rate) is recognized in profit and loss, except the exchange rate changes of principal and interest of foreign specific borrowed loan for production activities and construction of assets eligible for capitalization.

#### 2. Translation of financial statements denominated in foreign currencies

Assets and liabilities in the statement of financial position are translated at the spot exchange rate at the reporting date; Equity items for statement of financial position presented, other than "undistributed profits", are translated at the spot exchange rate of the date of transaction. Income and expenses in the statement of comprehensive income are translated at the average exchange rate for the current period. The conversion difference of the foreign currency statement resulting from the above conversion is listed in the "other comprehensive income" item of owner's equity. Foreign currency cash flow is converted using the spot exchange rate on the date of the cash flow. The impact of exchange rate changes on cash is shown separately in the cash flow statement.

### 4.9 Financial assets and financial liabilities

#### Confirmation and termination of financial instruments

The Group recognizes a financial asset or financial liability when it becomes a party to a financial instrument contract. If the following conditions are met, the confirmation of financial assets (or part of financial assets, or part of a group of similar financial assets) shall be terminated:

- (1) The contractual right to receive the cash flow of the financial asset is terminated;
- (2) The financial asset has been transferred, and the Group has transferred almost all risks and rewards of the ownership of the financial asset to the transferee;
- (3) The financial asset has been transferred. Although the Group has neither transferred nor retained almost all the risks and rewards related to the ownership of the financial asset, it has given up control of the financial asset.

When the current obligations of financial liabilities have been discharged in whole or in part, the Group shall terminate the recognition of the financial liabilities or the discharged part of the obligations. The difference between the book value of the derecognized part and the consideration paid shall be included in the current profit and loss.

#### 1. Classification and measurement of financial assets

The Group's financial assets are classified at the time of initial recognition based on the business model of the Group's corporate management of financial assets and the contractual cash flow characteristics of the financial assets: financial assets measured at fair value through profit and loss, financial assets as subsequently measured at amortized cost, financial assets that are measured at fair value and through other comprehensive income. Financial assets are measured at fair value at the time of initial recognition, but the accounts receivable or bills receivable arising from the sale of goods or the provision of services do not contain significant financing components or do not consider financing components of less than one year, the transaction price Initial measurement.

## ALUMINUM CORPORATION OF CHINA (Consolidated) Notes to the financial statements for the year of 2021

1 January 2021 to 31 December 2021

(Unless otherwise specified, the notes to the financial statements are all presented in RMB)

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For financial assets that are measured at fair value through profit or loss, the relevant transaction costs are directly included in the current profit and loss, and the related transaction costs of other types of financial assets are included in the initial recognized amount.

The subsequent measurement of financial assets depends on their classification:

### (1) Financial assets measured at amortized cost

For a financial asset measured at amortized cost, it is held within a business model whose objective is to hold financial assets in order to collect contractual cash flows, and its contractual cash flow characteristics are consistent with those of a basic lending arrangement, that is, the contractual terms of the financial asset give rise on specified dates to cash flows that are solely payments of principal and interest on the principal amount outstanding. The Group applies effective interest method and subsequently measures this type of financial assets at amortized costs, a gain or loss arising from amortization or impairment is recognized in profit or loss. Such financial assets mainly include monetary funds, accounts receivable, other receivables and long-term receivables.

### (2) Financial assets measured at fair value through other comprehensive income

Financial assets that meet the following conditions are classified as financial assets measured at fair value through other comprehensive income: it is held within a business model whose objective is to hold financial assets in order to collect contractual cash flows and the contract terms of the financial asset stipulate that the cash flow generated on a specific date is only the payment of the principal and the interest based on the outstanding principal amount. Such financial assets use the effective interest method to recognize interest income. Except for interest income, impairment losses and exchange differences recognized as current profits and losses, the other fair value changes are included in other comprehensive income. Such financial assets mainly include receivable financing. When financial assets are derecognized, the accumulated gains or losses previously included in other comprehensive income are transferred from other comprehensive income and included in the current profit and loss.

### (3) Equity instrument investment measured at fair value through other comprehensive income

The Group irrevocably chooses to designate certain non-trading equity instrument investments as financial assets that are measured at fair value through other comprehensive income. Only relevant dividend income (except for dividend income that is explicitly recovered as part of the investment cost) is calculated in the current profit and loss. The subsequent changes in fair value are included in other comprehensive income, and no provision for impairment is required. When financial assets are derecognized, the accumulated gains or losses previously included in other comprehensive income are transferred from other comprehensive income and included in retained earnings. Such financial assets are listed as investments in other equity

### (4) Financial assets measured at fair value through profit or loss

A financial asset is measured at fair value through profit or loss unless it is measured at amortized cost or at fair value through other comprehensive income in accordance with preceding paragraphs. The Group subsequently measures this type of financial assets at fair value; changes in fair values are recognized in profit or loss. Those with maturity exceeding one year from the balance sheet date and expected to be held for more than one year are listed as other non-current financial assets, and the rest are listed as trading financial assets.

## 2. Classification and measurement of financial liabilities

The Group's financial liabilities are classified into: financial liabilities measured at fair value through profits and losses, other financial liabilities, and derivatives designated as effective hedging instruments at the time of initial recognition. For financial liabilities that are measured at fair value through profit and loss, the relevant transaction costs are directly included in the current profit and loss, and the related transaction costs of other financial liabilities are included in the initial recognition amount.

The subsequent measurement of financial liabilities depends on its classification:

### (1) Financial liabilities at fair value through profit or loss

Financial liabilities that are measured at fair value through profits and losses include transactional financial liabilities (including derivatives that belong to financial liabilities) and financial liabilities designated as fair value at the initial recognition through profits and losses.

## ALUMINUM CORPORATION OF CHINA (Consolidated) Notes to the financial statements for the year of 2021

1 January 2021 to 31 December 2021

(Unless otherwise specified, the notes to the financial statements are all presented in RMB)

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It recognized as a transactional financial liability when meets one of the following conditions: the purpose of assuming the relevant financial liability is mainly to sell or repurchase in the near future; it is part of a centralized management of identifiable financial instrument portfolio, and there is objective evidence that the Company has adopted it recently Short-term profit-making mode; it is a derivative instrument, except for the derivative instrument that is designated as an effective hedging instrument, and the derivative instrument that conforms to the financial guarantee contract. Transactional financial liabilities (including derivatives that are financial liabilities) are subsequently measured at fair value. Except for hedge accounting, all changes in fair value are included in the current profit and loss.

Only when one of the following conditions is met can a financial liability be designated as a financial liability measured at fair value through profit and loss at the time of initial measurement: the accounting mismatch can be eliminated or significantly reduced; the formal written document of risk management or investment strategy has been It is stated that the financial instrument portfolio is managed, evaluated and reported to key management personnel on the basis of fair value; it contains one or more hybrid instruments with embedded derivatives, unless the embedded derivatives do not significantly change the cash flow of the hybrid instruments, Or the embedded derivative instruments should obviously not be separated from the related hybrid instruments; the hybrid instruments include embedded derivative instruments that need to be separated but cannot be separately measured at the time of acquisition or on the subsequent balance sheet date.

For such financial liabilities, subsequent measurement is carried out at fair value. Except for changes in fair value caused by changes in the Group's own credit risk, which are included in other comprehensive income, other changes in fair value are included in current profits and losses. Unless changes in fair value caused by changes in the Group's own credit risk are included in other comprehensive income which will cause or enlarge accounting mismatches in profit and loss, the Group will include all changes in fair value (including the amount affected by changes in its own credit risk) in current profit and loss.

After an enterprise designates a financial liability as a financial liability measured at fair value and whose changes are included in the current profit and loss at the time of initial recognition, it cannot be reclassified as other financial liabilities; other financial liabilities cannot be re-designated as fair value after initial recognition Financial liabilities that are measured and whose changes are included in the current profit and loss.

### (2) Other financial liabilities

For such financial liabilities, the actual interest rate method is adopted and subsequent measurement is carried out based on amortized cost. Such financial liabilities include notes payable, accounts payable, other payables, loans and bonds payable. Such financial liabilities are initially measured at the fair value after deducting transaction costs, and the actual interest rate method is used for subsequent measurement. Those with a maturity of less than one year (including one year) are listed as current liabilities; those with a maturity of more than one year but due within one year (including one year) from the balance sheet date are listed as non-current liabilities due within one year. Current liabilities; the rest are listed as non-current liabilities.

### 3. Impairment of financial instruments

Based on the expected credit losses, the Group recognizes an impairment loss on a financial asset measured at amortized cost, a financial asset at fair value through other comprehensive income (debt instrument investment), a lease receivable, a contract asset or a financial guarantee contract, and records a credit impairment loss.

The Group considers reasonable and evidence-based information about past events, current conditions, and forecasts of future economic conditions, and uses the risk of default as the weight to calculate the difference between the contractual cash flow receivable and the expected cash flow received Probability-weighted amount of the present value to confirm the expected credit loss.



## ALUMINUM CORPORATION OF CHINA (Consolidated) Notes to the financial statements for the year of 2021

1 January 2021 to 31 December 2021

(Unless otherwise specified, the notes to the financial statements are all presented in RMB)

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Regarding the financing of accounts receivable and accounts receivable formed from daily business activities such as selling goods and providing labor services, regardless of whether there is a major financing component, the Group measures the loss provision based on the expected credit loss for the entire duration. For lease receivables, the Group also chooses to measure the loss provision based on the expected credit loss for the entire duration.

For financial assets other than the above-mentioned simplified measurement methods, the Group assesses on each balance sheet date whether its credit risk has increased significantly since the initial recognition. If the credit risk has not increased significantly since the initial recognition, it is in the first stage. The Group measures the loss provision at the amount equivalent to expected credit losses in the next 12 months, and calculates interest income based on the book balance and the actual interest rate; if the credit risk has increased significantly since the initial recognition but no credit impairment has occurred, it is in the second stage, the Group measures the loss provision at the amount equivalent to the expected credit loss during the entire duration, and calculates the interest income based on the book balance and the actual interest rate; if credit impairment occurs after initial recognition, it is in the third stage, and the Group is based on the equivalent. The loss allowance is measured by the amount of expected credit losses during the entire duration, and interest income is calculated based on the amortized cost and the actual interest rate. For financial instruments with relatively low credit risk on the balance sheet date, the Group assumes that their credit risk has not increased significantly since the initial recognition.

The Group has regard to: (a) Receivables from customers with excellent credit ratings and secured collateral arising from sales of goods and services provided based on a single assessment of expected credit losses; (b) Except for (a), receivables from sales of goods and services provided Evaluate the expected credit loss of accounts receivable based on the aging combination; (c) Other financial assets are based on a single evaluation of expected credit loss. When a single financial asset cannot evaluate the expected credit loss at a reasonable cost, the Group divides the portfolio based on the characteristics of credit risk Evaluation.

The Group will accrue or reverse the loss provision into the current profit and loss. For debt instruments that are held at fair value and whose changes are included in other comprehensive income, the Group adjusts other comprehensive income while recording impairment losses or gains in current profits and losses

### 1. Offsetting financial instruments

A financial asset and a financial liability shall be offset and the net amount presented in the statement of financial position when, and only when, the Group: (a) currently has a legally enforceable right to set off the recognized amounts; and (b) intends either to settle on a net basis, or to realize the asset and settle the liability simultaneously.

### 2. Financial guarantee contract

A financial guarantee contract refers to a contract in which the issuer pays a specific amount to the contract holder who has suffered losses when a specific debtor is unable to repay the debt in accordance with the terms of the debt instrument. Financial guarantee contracts are measured at fair value at the time of initial confirmation. Except for financial guarantee contracts designated as financial liabilities measured at fair value and whose changes are included in the current profit and loss, other financial guarantee contracts are determined on the balance sheet date after initial confirmation. The higher of the expected credit loss reserve amount and the initial recognition amount after deducting the accumulated amortization amount determined in accordance with the income recognition principle shall be subsequently measured.

### 3. Derivative financial instruments

The Group uses derivative financial instruments, such as forward commodity contracts to hedge commodity price risks. Derivative financial instruments are initially measured at the fair value on the day when the derivative transaction contract is signed, and subsequently measured at their fair value. Derivative financial instruments with a positive fair value are recognized as an asset, and those with a negative fair value are recognized as a liability.

Except for the gains or losses related to hedge, the gains or losses arising from changes in the fair value of derivatives are directly included in the current profits and losses.

### 4. Transfer of financial assets

If the Group has transferred almost all the risks and rewards in the ownership of financial assets to the transferee, it shall terminate the recognition of the financial assets; if it retains almost all the risks and rewards in the ownership of the financial assets, it shall not terminate the recognition of the financial assets.

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If the Group neither transfers nor retains almost all the risks and rewards of the ownership of financial assets, it shall be dealt with in the following situations: if the control of the financial assets is abandoned, the financial assets shall be terminated and the resulting assets and liabilities shall be confirmed; If the financial asset is controlled, the relevant financial assets shall be recognized according to the extent of its continued involvement in the transferred financial assets, and the relevant liabilities shall be recognized accordingly.

For those who continue to be involved through the provision of financial guarantees for the transferred financial assets, the assets formed by the continued involvement shall be confirmed according to the lower of the book value of the financial assets and the amount of financial guarantees. The financial guarantee amount refers to the highest amount that will be required to be repaid among the consideration received.

### 4.10 Hedging Instruments

According to the hedging relationship, the Company divides hedging into fair value hedging, cash flow hedging and overseas net investment hedging.

1. For hedging instruments that meet the following conditions at the same time, use the hedge accounting method for processing
  - (1) The hedging relationship is only composed of eligible hedging instruments and hedged items.
  - (2) At the beginning of the hedging, the Company officially designated the hedging tool and the hedged item, and prepared written documents on the hedging relationship and risk management strategies and risk management objectives for hedging.
  - (3) The hedging relationship meets the requirements for hedging effectiveness.

If the hedging meets the following conditions simultaneously, the hedging relationship shall be determined to meet the requirements for hedging validity:

- a) There is an economic relationship between the hedged item and the hedging instrument. This economic relationship makes the value of the hedging instrument and the hedged item change in opposite directions due to the same hedged risk.
  - b) The influence of credit risk is not dominant in the value changes caused by the economic relationship between the hedged item and the hedging instrument.
  - c) The hedging ratio of the hedging relationship is equal to the ratio of the Company's actual number of hedged items to the actual number of hedging instruments, but does not reflect the imbalance in the relative weights of the hedged items and the hedging instruments. This imbalance will lead to invalid hedges and may produce accounting results that are inconsistent with the hedge accounting objectives.
2. Accounting treatment of fair value hedges
    - (1) The gains or losses from hedging instruments are included in the current profits and losses. If a hedging instrument is selected to hedge a non-trading equity instrument investment (or its component parts) that is measured at fair value and whose changes are included in other comprehensive income, the gains or losses generated by the hedging instrument are included in other comprehensive income.
    - (2) The gain or loss of the hedged item due to the hedged risk exposure is included in the current profit and loss, and the book value of the confirmed hedged item that is not measured at fair value is adjusted. If the hedged item is a financial asset (or its component parts) that is measured at fair value and whose changes are included in other comprehensive income, the gain or loss resulting from the hedged risk exposure is included in the current profit and loss, and its book value has been fair Value measurement, no adjustment is required; the hedged item is the non-trading equity instrument investment (or its component parts) that the Company chooses to be measured at fair value and whose changes are included in other comprehensive income, and its profit formed by the hedged risk exposure Or the loss is included in other comprehensive income, and its book value has been measured at fair value and does not need to be adjusted.
    - (3) If the hedged item is an unrecognized definite commitment (or its component parts), the cumulative change in fair value caused by the hedged risk after the hedging relationship is designated is recognized as an asset or liability, and the related gains or losses are included in Profit and loss for each relevant period. When a certain commitment is fulfilled to obtain an asset or assume a liability, the initial confirmation amount of the asset or liability is adjusted to include the accumulated change in the fair value of the confirmed hedged item.

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(4) If the hedged item is a financial instrument (or its component parts) measured at amortized cost, the adjustment to the book value of the hedged item shall be amortized according to the actual interest rate recalculated on the amortization date and included in the current period profit and loss. The amortization can start from the adjustment date, but no later than the point when the hedged item is terminated and adjusted for hedging gains and losses. If the hedged item is a financial asset (or its component parts) that is measured at fair value and whose changes are included in other comprehensive income, the accumulated and recognized hedging gains or losses are amortized in the same way and included in the current period Profit and loss, but do not adjust the book value of the financial asset (or its component parts).

### 3. Accounting treatment of cash flow hedges

(1) The part of the gains or losses generated by hedging instruments that is valid for hedging shall be used as a cash flow hedging reserve and included in other comprehensive income. The amount of the cash flow hedge reserve is determined according to the lower of the absolute amounts of the following two items:

a) Accumulated gains or losses of hedging instruments since the beginning of hedging;  
b) The cumulative change in the present value of the expected future cash flow of the hedged item since the beginning of the hedge. The amount of cash flow hedging reserve included in other comprehensive income in each period is the amount of change in cash flow hedging reserve for the current period.

(2) The part of the gains or losses generated by hedging instruments that is ineffective in hedging (that is, other gains or losses after deducting other comprehensive income) shall be included in the current profits and losses.

(3) The amount of cash flow hedge reserve shall be handled in accordance with the following regulations:

a) The hedged item is an expected transaction, and the expected transaction causes the Company to subsequently confirm a non-financial asset or non-financial liability, or the expected transaction of a non-financial asset or non-financial liability forms a determination applicable to fair value hedge accounting. When making a commitment, the cash flow hedge reserve amount originally recognized in other comprehensive income is transferred out and included in the initial recognized amount of the asset or liability.

b) For the cash flow hedging that does not belong to the previous article, in the same period when the expected cash flow of the hedged affects the profit and loss, the cash flow hedging reserve amount originally recognized in other comprehensive income is transferred out and included in the current profit and loss.

c) If the amount of cash flow hedge reserve recognized in other comprehensive income is a loss, and the loss is expected to be irrecoverable in whole or in part in the future accounting period, when it is estimated that it cannot be compensated, the part that is expected to be unrecoverable will be removed from other comprehensive income. The transfer out of comprehensive income shall be included in the current profit and loss.

### 4. Hedging of net investment in overseas operations

The hedging of net investment in overseas operations, including the hedging of monetary items that are part of the net investment accounting treatment, is handled by the Company in accordance with regulations similar to cash flow hedge accounting:

(1) The part of the gains or losses formed by hedging instruments that is valid for hedging shall be included in other comprehensive income.

(2) When disposing of overseas operations in whole or in part, the above-mentioned hedging instrument gains or losses included in other comprehensive income shall be transferred out accordingly and included in the current profits and losses.

(3) The part of the profit or loss formed by hedging instruments that is invalid for hedging shall be included in the current profits and losses.

### 5. Termination of the use of hedge accounting

In the event of one of the following situations, the use of hedge accounting shall be terminated:

(1) Due to changes in risk management objectives, the hedging relationship no longer meets the risk management objectives.

(2) The hedging instrument has expired, has been sold, the contract has been terminated, or has been exercised.

(3) There is no longer an economic relationship between the hedged item and the hedging instrument, or the impact of credit risk begins to dominate in the value changes caused by the economic relationship between the hedged item and the hedging instrument.

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- (4) The hedging relationship no longer satisfies the other conditions for the use of hedging accounting methods specified in this standard. In the case of applying the rebalancing of the hedging relationship, the enterprise should first consider the rebalancing of the hedging relationship, and then assess whether the hedging relationship meets the conditions for applying the hedging accounting method specified in this Standard.

The termination of hedging accounting may affect the whole or part of the hedging relationship. When only a part of the hedging relationship is affected, the remaining unaffected part still applies to hedging accounting.

### 6. Fair value selection of credit risk exposure

When using a credit derivative that is measured at fair value and whose changes are included in the current profit and loss to manage the credit risk exposure of a financial instrument (or its component parts), the financial instrument (or its component parts) can be initially recognized and subsequently measured. When it is in or has not been confirmed, it shall be designated as a financial instrument measured at fair value and its changes shall be included in the current profit and loss, and written records shall be made at the same time, but the following conditions shall be met at the same time:

- (1) The subject of financial instrument credit risk exposure (such as the borrower or loan commitment holder) is consistent with the subject involved in the credit derivative instrument;
- (2) The repayment level of financial instruments is consistent with the repayment level of instruments that must be delivered in accordance with the terms of the credit derivatives.

### 4.11 Accounts receivable

The Group always measures its loss provision in accordance with the amount equivalent to the expected credit loss during the entire existence period of accounts receivable formed from transactions regulated by Accounting Standards for Business Enterprises No. 14 - Revenue Standards without significant financing components.

The judgment of whether credit risk has increased significantly since the initial recognition. The Group determines whether the credit risk of a financial instrument has increased significantly by comparing the default probability within the expected lifetime determined by the financial instrument at the time of initial recognition with the default probability within the expected lifetime determined by the instrument at the balance sheet date. In determining whether credit risk has increased significantly since the initial recognition, the Group considers reasonable and evidence-based information, including forward-looking information, that is readily available at no unnecessary additional cost or effort.

Portfolio based assessment. For accounts receivable, the group in the aspect of individual tools can't at a reasonable cost to obtain sufficient evidence about credit risk increased significantly, and on the basis of combination evaluation is a significant increase in credit risk is feasible, so the group according to the customer credit risk rating, and the date of initial recognition and the rest of the contract deadline for common risk characteristics, Group accounts receivable and assess credit risk significantly on a portfolio basis.

Measurement of expected credit losses. Expected credit losses refer to the weighted average of credit losses of financial instruments weighted by the risk of default. Credit loss refers to the difference between all contract cash flows discounted and receivable under the contract and all expected cash flows received by the group at the original real interest rate, namely, the present value of all cash shortfalls.

The Group calculates the expected credit loss of accounts receivable on the balance sheet date. If the expected credit loss is greater than the carrying amount of the current impairment provision of accounts receivable, the Group recognizes the difference as an impairment loss of accounts receivable, debits the "credit impairment Loss" and credits the "allowance for doubtful Accounts". Instead, the Group recognizes the difference as an impairment gain and records the opposite.

If the group has actual credit losses and considers the relevant receivables to be unrecoverable and approved for verification and cancellation, "Bad Debt reserve" and "Receivables" shall be debited and credited according to the approved amount of verification and cancellation. If the amount of write-off is greater than the loss provision, the difference shall be debited as "credit impairment loss" on schedule.

The Group separately determines expected credit losses for accounts receivable with significantly different credit risks. In addition to the receivables that determine the expected credit losses individually, the group divides the receivables into several combinations based on the characteristics of credit risks based on customer nature, historical credit loss experience, judgment of future recovery risks and analysis of credit risk characteristics, and calculates the expected credit losses on the basis of the combination.

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#### **4.12 Receivables financing**

If the financial asset meets the following conditions at the same time, it shall be classified as the financial asset measured at fair value and the change of which is included in other comprehensive income: The company's business model of managing the financial asset aims at both collecting contract cash flow and selling the financial asset; The terms of the contract for this financial asset provide that cash flows generated on a particular date are only payments on principal and interest based on the outstanding principal amount.

This company will hold the notes receivable and accounts receivable, to form such as discount or endorsement to transfer, and this kind of business is relatively frequent, involves the amount is larger, the charge contract management business model in both cash flow and sell, in accordance with the relevant provisions of rule of financial instruments, the classification and measured at fair value changes and the changes are recorded in the financial assets of other comprehensive income.

#### **4.13 Other receivables**

The group shall measure loss provisions for other receivables under the following circumstances : (1) for financial assets whose credit risks have not increased significantly since the initial recognition, the group shall measure loss provisions according to the amount of expected credit losses in the next 12 months; (2) If the credit risk of a financial asset has increased significantly since the initial recognition, the Group shall measure the loss provision at an amount equivalent to the expected credit loss during the entire term of the financial instrument; (3) For the purchase or origination of financial assets with credit impairment, the Group shall measure the loss provision according to the amount equivalent to the expected credit loss during the entire term of existence.

Portfolio based assessment. For other receivables, the group in the aspect of individual tools can't at a reasonable cost to obtain sufficient evidence about credit risk increased significantly, and on the basis of combination evaluation is a significant increase in credit risk is feasible, so the group according to the type of financial instrument, the credit risk rating, collateral type, and the date of initial recognition and the rest of the contract deadline for common risk characteristics, Group other receivables and consider assessing significant increases in credit risk on a portfolio basis.

#### **4.14 Contract assets**

##### **1. Confirmation method and standard of contract assets**

Assets under contract are the rights of the Company to receive consideration for goods which have been transferred to the customer and are subject to factors other than the passage of time. If the Company sells two clearly distinguishable goods to the customer, the Company is entitled to receive payment because of the delivery of one of the goods, but the receipt of the payment is contingent on the delivery of the other goods, the Company will treat the right to collect as an asset under the contract.

##### **2. Determination method and accounting treatment method of expected credit loss of contract assets**

For the determination of expected credit losses of contract assets, refer to the above description of "Accounts receivable".

For accounting treatment, the Company calculates the expected credit loss of the contract assets on the balance sheet date. If the expected credit loss is greater than the carrying amount of the impairment provision of the current contract assets, the Company recognizes the difference as an impairment loss, debits the "asset impairment loss" and credits the "Contract asset impairment Provision". Instead, the Company recognizes the difference as an impairment gain and records the opposite.

If the company has actual credit losses and deems relevant contract assets unrecoverable, and has approved the write-off, the "Contract Asset Impairment Reserve" shall be debited and the "Contract asset" credited according to the approved write-off amount. If the write-off amount is greater than the loss provision, the "asset impairment loss" shall be debited according to the difference.

#### **4.15 Inventories**

Inventories mainly include raw materials, packaging, low value assembles, work in progress and finished goods, etc.

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Inventory counting is performed using the perpetual inventory system. When acquired, the cost of inventories shall be measured at the actual costs, which comprise costs of purchase, costs of conversion and other costs. During the physical flows of inventories, their cost shall be assigned by using the weighted average cost formula. Low-value consumables and packaging materials are amortized according to the number of times of use or one-off write-off method.

Inventories at the end of the period are priced based on the lower of cost and net realizable value. As for inventories that are damaged, fully or partially obsolete, or whose sales price is lower than cost, etc., the unrecoverable part of the cost is expected to be provided for inventory depreciation. Reserves for inventory depreciation of inventory commodities and bulk raw materials are drawn based on the difference between the cost of a single inventory item and its net realizable value; other raw and auxiliary materials with a large quantity and lower unit prices are drawn inventory depreciation reserves by category.

The net realizable value of the inventory of goods that are directly used for sale, such as inventory goods, products in progress, and materials for sale, is determined by the estimated selling price of the inventory minus estimated sales expenses and related taxes; The net realizable value of the material inventory held is determined by the estimated selling price of the finished product produced minus the estimated cost to be incurred at the time of completion, estimated selling expenses and relevant taxes.

### 4.16 Long-term equity investments

1. Judgment of having control, joint control or significant influence on the investee

The long-term equity investments of the Group mainly include equity investments held by the Group that can exercise control and significant influence on the investee, as well as equity investments in its joint ventures.

Control means that the Group has the power over the investee, enjoys variable returns by participating in the relevant activities of the investee, and has the ability to use the power over the investee to affect the amount of its return.

Joint control refers to the common control of an arrangement in accordance with relevant agreements, and the relevant activities of the arrangement must be agreed by the participants who share control rights before making decisions. A joint arrangement refers to an arrangement controlled by two or more parties. A joint venture refers to a joint arrangement in which the joint venture party only has the rights to the net assets of the arrangement.

Significant influence refers to the power to participate in decision-making on the financial and operating policies of the investee, but cannot control or jointly control the formulation of these policies with other parties. The determination of significant influence is mainly based on sending representatives to the investee's board of directors or similar authority to exercise significant influence through the right to speak in the financial and operating decision-making process of the investee; the Group directly or indirectly through its subsidiaries. If there is clear evidence showing that more than 20% (inclusive) but less than 50% of the voting shares of the investee can not participate in the production and operation decision-making of the investee under such circumstances, it will not have a significant impact. When determining whether it can exert a significant influence on the investee, the Group will consider the voting shares of the investee directly or indirectly held by the Group on the one hand and also consider the impact of the current executable potential voting rights held by the Group and other parties after being converted into equity in the investee, such as the impact of current convertible warrants, share options and convertible corporate bonds issued by the invested entity.

2. The method of determining the cost of long-term equity investment, subsequent measurement and profit and loss recognition

Where cash payment, transfer of non-cash assets or debt assumption are used as the merger consideration, the initial investment cost of the long-term equity investment shall be the share of the book value of the acquired owner's equity of the merged party in the ultimate controlling party's consolidated financial statements on the merger date. The difference between the initial investment cost of long-term equity investment and the cash paid, the transferred non-cash assets, and the book value of the debt assumed shall be adjusted for the equity premium in the capital reserve; if the equity premium in the capital reserve is insufficient to offset, the adjustment shall be retained income.

If the issuance of equity securities is used as the merger consideration, the book value of the acquired owner's equity of the merged party in the ultimate controlling party's consolidated financial statements shall be used as the initial investment cost of the long-term equity investment on the merger date, and the total face value of the issued shares shall be used as the initial investment cost. Equity, the difference between the initial investment cost of long-term equity investment and the total face value of the issued shares, adjust the equity premium in the capital reserve; if the



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equity premium in the capital reserve is not enough to offset, adjust the retained earnings.

Business combination not under the same control: The Company uses the combination cost determined on the purchase date as the initial investment cost of the long-term equity investment.

Intermediary fees such as auditing, legal services, evaluation and consulting, and other related management fees incurred for business mergers are included in the current profits and losses when they are incurred; transaction costs of equity securities or debt securities issued as consideration for the merger are included in equity securities Or the initial recognition amount of debt securities.

In addition to the above-mentioned long-term equity investment obtained through a business combination, the long-term equity investment obtained by paying cash shall be based on the actual purchase price as the investment cost; the long-term equity investment obtained by issuing equity securities shall be based on the fair value of the issued equity securities As investment cost; long-term equity investment invested by investors shall be based on the value agreed in the investment contract or agreement as investment cost; long-term equity investment obtained by debt restructuring, non-monetary asset exchange, etc., shall be determined in accordance with relevant accounting standards.

The Group adopts the cost method for long-term equity investments that can exercise control over the investee; for investment in joint ventures and associates, it adopts the equity method for accounting.

When the cost method is used, long-term equity investment is priced at the initial investment cost. If the Group increases or recovers the cost of its investments in the investee, the cost of long-term equity investments shall be adjusted accordingly. Profits or cash dividends declared to be distributed by the investee are recognized as investment income.

Under equity method, when the initial cost of long-term equity investments exceeds the Group's proportionate share in the acquisition-date fair values of the investee's identifiable net assets, the initial cost of investments is not subject to adjustment; when the initial cost of investments is lower than the Group's proportionate share in the acquisition-date fair values of the investee's identifiable net assets, the difference shall be recognized in profit or loss, and the cost of investments shall be adjusted at the same time. After the long-term equity investment is obtained, the investment income and other comprehensive income shall be recognized according to the share of the net profit and loss and other comprehensive income realized by the invested entity that should be enjoyed or shared in the current year, and the book value of the long-term equity investment shall be adjusted at the same time; The portion of the profit or cash dividends declared by the investment unit shall be calculated, and the book value of the long-term equity investment shall be reduced accordingly; the investor shall adjust the long-term change of the owner's equity in addition to the net profit and loss, other comprehensive income and profit distribution of the invested unit. The book value of the equity investment is included in the owner's equity. When confirming the share of the net profit and loss of the investee, the net profit of the investee is calculated on the basis of the fair value of the identifiable assets of the investee when the investment is obtained, and in accordance with the Group's accounting policies and accounting period. Adjust and offset the unrealized internal transaction gains and losses that occur with associates and joint ventures in accordance with the proportion of the share attributable to the investment company to confirm the investment income.

### 3. Changes in long-term equity investment

For additional investment and other reasons that can exercise joint control or significant influence on the investee but do not constitute control, the fair value of the equity investment classified as available-for-sale financial assets plus the additional investment cost shall be regarded as the sum of the original holdings The initial investment cost calculated by the equity method, the difference between its fair value and the book value, and the accumulated fair value changes originally included in other comprehensive income are transferred to the current profit and loss calculated by the equity method. The difference between the initial investment cost calculated above and the fair value share of the investee's identifiable net assets on the additional investment date determined based on the new shareholding ratio after the additional investment. If the former is greater than the latter, no adjustment will be made. The book value of the long-term equity investment; if the former is less than the latter, the difference shall be adjusted to the book value of the long-term equity investment and included in the current non-operating income.

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For long-term equity investments that can exercise control over investees that are not under the same control due to additional investment and other reasons, when preparing individual financial statements, the book value of the original equity investment plus the added investment cost shall be used as the reform. The initial investment cost calculated by the cost method. The other comprehensive income recognized by equity investment before the purchase date due to the equity method shall be accounted for on the same basis as the investee's direct disposal of related assets or liabilities when disposing of the investment. If the equity investment held before the purchase date is classified as available-for-sale financial assets for accounting treatment, the accumulated fair value changes that were originally included in other comprehensive income shall be transferred to the current profit and loss when accounting for the cost method.

The Group no longer has joint control or significant influence on the investee due to the disposal of part of the equity investment, and the remaining equity after disposal is classified as an available-for-sale financial asset, its fair value on the day when the joint control or significant influence is lost. The difference between the book value and the book value is included in the current profit and loss. The other comprehensive income recognized by the original equity investment due to the equity method is used for accounting treatment on the same basis as the direct disposal of related assets or liabilities by the investee when the equity method is terminated;

If the investor loses control of the investee due to the disposal of part of the equity investment, etc., when preparing individual financial statements, if the remaining equity after disposal can exercise joint control or exert significant influence on the investee, the equity method shall be adopted instead. When the remaining equity is deemed to be acquired, the equity method is used to calculate and adjust; the remaining equity after disposal cannot exercise joint control or significant influence on the investee, and is classified as an available-for-sale financial asset, which is losing control the difference between the fair value and the book value on that date is included in the current profit and loss.

#### 4. Disposal of long-term equity investment

When disposing of a long-term equity investment, the difference between its book value and the actual purchase price shall be included in the current investment income. For long-term equity investments accounted for by the equity method, when disposing of the investment, the same basis as the direct disposal of related assets or liabilities by the investee shall be adopted, and the portion originally included in other comprehensive income shall be accounted for in the corresponding proportion.

#### 4.17 Investment properties

The Group's investment properties include the leased land use right, the land use right held and ready to be transferred after appreciation, and leased buildings.

The Group chooses cost model for initial measurement of investment property. The cost of outsourcing investment property includes the purchase price, related taxes and other expenditures that can be directly attributable to the asset; the cost of self-built investment real estate consists of the necessary expenditures incurred before the construction of the asset reaches the expected usable state.

After initial recognition, the Group chooses cost model to measure investment property; the depreciation or amortization methods applied to the investment property shall be consistent with fixed assets and intangible assets. On the balance sheet date, if there are signs that the investment property is impaired, the corresponding impairment z

#### 4.18 Fixed assets

Fixed assets are tangible items that are held for use in the production or supply of goods or services, for rental to others, or for administrative purposes. They are expected to be used during more than one financial year.

Fixed assets include houses and buildings, machinery and equipment, transportation vehicles, office equipment, and others. The cost at the time of acquisition is used as the value recorded. Among them, the cost of purchased fixed assets includes the purchase price and import duties and other related taxes, and Other expenditures that can be directly attributable to the fixed asset before the fixed asset reaches its intended useable state; the cost of self-built fixed assets consists of the necessary expenditures incurred before the asset reaches its intended useable state; investors; the invested fixed assets are recorded at the value agreed in the investment contract or agreement, but if the value agreed in the contract or agreement is not fair, the fixed assets are recorded at fair value; for fixed assets leased by finance leases, the lower of the fair value of the leased assets on the lease start date and the present value of the minimum lease payment shall be the book value.

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Subsequent expenditures related to fixed assets, including repair expenditures, renewal and transformation expenditures, etc., which meet the conditions for the recognition of fixed assets, are included in the cost of fixed assets. In addition, the book value of the replaced part shall be terminated. Those that do not meet the conditions for the recognition of fixed assets shall be included in the current profits and losses when they occur.

Except for fixed assets that have been fully depreciated and are still in use and land that is separately priced and recorded, the Group accrues depreciation for all fixed assets. The average life method (or other methods) is used when accruing depreciation, and it is included in the cost or current expenses of the relevant assets according to the purpose.

The classified depreciation period, estimated net residual value rate, and depreciation rate of the Group's fixed assets are as follows:

No.	Category	Depreciation period (years)	Estimated salvage rate (%)	Annual depreciation rate (%)
1	houses and buildings	8-45	5.00	2.11-11.88
2	Machinery and equipment	3-30	5.00	3.17-31.67
3	Transport vehicle	5-12	5.00	7.92-19.00
4	Electronic equipment	3-12	5.00	7.92-31.67
5	Office equipment	3-10	5.00	9.50-31.67
6	Hotel Industry Furniture	5-20	5.00	4.75-19.00
7	Other	5-20	5.00	4.75-19.00

At the end of each year, the Group reviews the estimated useful life, estimated net residual value and depreciation method of fixed assets, and if there is any change, it is treated as a change in accounting estimates.

When a fixed asset is disposed of, or when it is expected that no economic benefits will be generated through use or disposal, the confirmation of the fixed asset shall be terminated. The amount of disposal income from the sale, transfer, scrapping or damage of fixed assets after deducting its book value and related taxes shall be included in the current profit and loss.

### 4.19 Construction in progress

The engineering cost according to the value of the installed equipment, the installation cost, and the expenditure incurred in the trial operation of the project. The cost of construction in progress also includes borrowing costs and exchange gains and losses that should be capitalized.

From the date when the construction in progress reaches the expected usable state, the fixed assets shall be carried forward according to the estimated value according to the project budget, cost or actual cost of the project. Depreciation will be accrued from the following month, and the difference in the original value of the fixed assets will be adjusted after the completion of the final accounting procedures.

### 4.20 Right-of-use assets

The company's use-right assets mainly include houses and buildings, machinery and equipment, and land use-right.

#### 1. Initial measurement

On the commencement date of the lease term, the company shall make initial measurement of the right to use assets at cost. The cost includes the following four items: ① The initial measurement amount of the lease liability; (2) The amount of lease payment paid on or before the beginning of the lease term, if there is lease incentive, will be deducted from the amount of lease incentive already enjoyed; (3) The initial direct cost is the incremental cost of the lease; (4) The costs expected to be incurred for disassembling and removing the leased assets, restoring the site where the leased assets are located or restoring the leased assets to the state stipulated in the lease terms, except those incurred for the production of inventory.

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### 2. Follow-up measurement

After the beginning of the lease term, the Company adopts the cost model to measure the assets of the right of use, that is, to measure the assets of the right of use at cost minus accumulated depreciation and accumulated impairment loss. If the Company re-measures the lease liabilities in accordance with relevant provisions of the lease standards, the book value of the assets of the right of use shall be adjusted accordingly.

#### (1) Depreciation of tenure assets

The company shall depreciate the right to use assets from the beginning date of the lease term. Usufruct assets are usually depreciated from the month in which the lease term begins. The amount of depreciation shall be included in the cost or current profit or loss of the relevant assets according to the use of the right to use assets

When determining the method of depreciation of the right to use assets, the company shall make a decision based on the expected way of consumption of economic benefits related to the right to use assets, and shall calculate and depreciate the right to use assets using the straight-line method.

The company shall follow the following principles when determining the depreciation life of the use-right asset: If the ownership of the leased asset can be reasonably determined at the end of the lease term, depreciation shall be calculated and deducted during the remaining service life of the leased asset; Where it is not reasonably certain that the ownership of the leased asset can be acquired at the end of the lease term, depreciation shall be calculated and withdrawn during the period during which the lease term and the remaining service life of the leased asset are shorter.

#### (2) Impairment of use-right assets

In case of impairment of the right to use assets, the Company shall carry out subsequent depreciation according to the book value of the right to use assets after deducting impairment losses.

### 4.21 Borrowing costs

Borrowing costs include borrowing interest, amortization of discounts or premiums, ancillary expenses, and exchange differences arising from foreign currency borrowings. Borrowing costs that can be directly attributable to the acquisition, construction or production of assets that meet the capitalization conditions, when the asset expenditure has incurred, the borrowing costs have occurred, and the acquisition, construction or production activities necessary for the asset to reach the intended usable or saleable state have been At the beginning, capitalization starts; when the acquisition, construction or production of assets that meet the capitalization conditions reaches the intended use or sale status, capitalization is stopped. The remaining borrowing costs are recognized as expenses in the current period.

The actual interest expenses incurred in the current period of special borrowings shall be capitalized after deducting the interest income obtained by depositing unused borrowing funds in the bank or the investment income obtained from temporary investments; general borrowings shall be capitalized based on the accumulated asset expenditures in excess of the assets of the special borrowings The weighted average of expenditures is multiplied by the weighted average interest rate of the general borrowings used to determine the amount of capitalization.

Assets that meet the conditions for capitalization refer to fixed assets, investment real estate, inventory and other assets that require a long period of time (usually more than one year) of purchase, construction or production activities to reach the intended usable or saleable state.

If an asset that meets the capitalization conditions is abnormally interrupted during the acquisition, construction or production process, and the interruption lasts for more than 3 months, the capitalization of borrowing costs shall be suspended until the acquisition, construction or production activities of the asset restart.

### 4.22 Intangible assets

The Group's intangible assets include land use rights, patented technology, non-patented technology, etc., which are measured at the actual cost at the time of acquisition. Among them, the actual cost of the purchased intangible assets shall be the actual payment and other related expenses. The actual cost of the intangible assets invested by the investor shall be determined at the value agreed in the investment contract or agreement, but if the value agreed in the contract or agreement is not fair, the actual cost shall be determined at the fair value.

The land use right shall be amortized evenly according to the transfer period from the start date of transfer. Patented technology, non-patented technology and other intangible assets are amortized evenly according to the shortest of the expected useful life, the beneficial life specified in the contract, and the effective life specified in the law.

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The estimated useful life and amortization method of intangible assets with limited useful lives are reviewed at the end of each year. If there is any change, it will be treated as a change in accounting estimates. In each accounting period, the estimated useful life of intangible assets with uncertain useful life is reviewed. For intangible assets with a limited useful life, from the time when they are available for use, their original value is subtracted from the estimated net residual value and the accumulated amount of provision for impairment. Concessions with specific output restrictions (such as mining rights) are amortized in accordance with the output method. Other than that, the intangible assets are amortized according to the straight-line method during the useful life of the intangible asset.

Intangible assets with uncertain service life are not amortized, and the Group reviews the service life of the intangible assets in each accounting period. For intangible assets with an indefinite useful life, the basis for determining the indefinite useful life is: (a) It is derived from contractual rights or other legal rights, but there is no clear useful life in contract or legal provisions; (b) Comprehensive industry conditions or Relevant experts still cannot judge the period for which intangible assets will bring economic benefits to the Group.

### 4.23 Research and development expenditure

The R & D expenditure of the Group is divided into R & D expenditure and development expenditure according to its nature and whether there is great uncertainty in the final formation of intangible assets from R & D activities. The expenditure in the research stage shall be included in the current profits and losses when it occurs; the expenditure in the development stage shall be recognized as intangible assets if it meets the following conditions at the same time. Expenditure on the research phase shall be included in profit or loss when it is incurred. Expenditure on the development phase shall be recognized as intangible asset if the Group can demonstrate all of the following; otherwise, it shall be included in profit or loss:

1. The technical feasibility of completing the intangible asset so that it will be available for use or sale;
2. Its intention to complete the intangible asset and use or sell it;
3. How the intangible asset will generate probable future economic benefits. Among other things, the Group can demonstrate the existence of a market for the output of the intangible asset or the intangible asset itself or, if it is to be used internally, the usefulness of the intangible asset;
4. The availability of adequate technical, financial and other resources to complete the development and to use or sell the intangible asset;
5. Its ability to measure reliably the expenditure attributable to the intangible asset during its development.

If research expenditure cannot be distinguished from development expenditure, all expenditure will be recorded in profit or loss as a whole. The development expenditure that has been included in the profit and loss in the previous period will not be recognized as an asset in the subsequent period. Expenditures in the development phase that have been capitalized are listed as development expenditures on the balance sheet, and are converted to intangible assets for presentation as of the day when the project reaches the expected usable state.

### 4.24 Long-term prepaid expenses

The long-term prepaid expenses of the Group refer to expenses that have been paid but should be borne by the current period and subsequent periods with a amortization period of more than one year (excluding one year). Such expenses are amortized evenly during the benefit period. If the long-term deferred expenses item cannot benefit the future accounting period, all the amortized value of the item that has not been amortized shall be transferred to the current profit and loss.

### 4.25 Goodwill

Goodwill is the difference between the cost of equity investment or the cost of a business combination not under the same control over the fair value share of the investee or the identifiable net assets acquired by the business combination on the acquisition date or purchase date.

Goodwill related to subsidiaries is separately listed in the consolidated financial statements, and goodwill related to associates and joint ventures is included in the book value of long-term equity investments.

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#### **4.26 Contract liability**

Contractual liabilities reflect the company's obligation to transfer goods to customers for consideration received or receivable from customers. If the Customer has paid the contract consideration before the Company transfers the goods to the customer or the Company has obtained the unconditional right to receive the contract consideration, the contract liability shall be recognized according to the amount received or receivable at the earlier point of the actual payment made by the Customer and the amount due to be paid.

#### **4.27 Employee benefits**

The employee benefits of the Group include short-term employee benefits, post-employment benefits, termination benefits and other long-term employee benefits. The benefits provided by the Group to employee spouses, children, dependants, survivors of deceased employees and other beneficiaries are also employee benefits.

1. Short-term remuneration refers to the employee remuneration that the Group needs to pay in full within twelve months after the end of the annual reporting period in which the employee provides related services, except for compensation for termination of labor relations with the employee. The Group's short-term remuneration includes: Employee wages, bonuses, allowances and subsidies, employee welfare, medical insurance, industrial injury insurance, and maternity insurance, social insurance premiums, housing provident fund, labor union funds and employee education funds, short-term paid absences, short-term profit sharing plan and other non-monetary benefits.

The actual short-term employee benefits for the accounting period when the employee has rendered service to the Group are recognized as liability, and recorded in profit or loss or in the cost of related asset. The non-monetary benefits are measured at fair value.

2. Post-employment benefits refer to the various forms of remuneration and benefits provided by the Group after the employees retire or terminate the labor relationship with the Group in order to obtain the services provided by the employees, except for short-term remuneration and dismissal benefits.

The defined contribution plan of the Group refers to the payment of basic endowment insurance, unemployment insurance, and enterprise annuity for employees in accordance with relevant regulations of the local government. During the accounting period when employees provide services to the Group, the payable amount is calculated based on the local payment base and proportion, and the paid amount is recognized as a liability and included in the current profit and loss or the cost of related assets.

The Group assigns the welfare obligations arising from the defined benefit plan to the period during which the employees provide services according to the formula determined by the expected cumulative welfare unit method, and includes it in the current profit and loss or the cost of related assets. The deficit or surplus formed by the present value of the defined benefit plan's obligations minus the fair value of the defined benefit plan's assets is recognized as a defined benefit plan's net liabilities or net assets. If there is a surplus in the defined benefit plan, the Group uses the lower of the surplus of the defined benefit plan and the asset ceiling to measure the net assets of the defined benefit plan.

The discount rate of all defined benefit plan obligations, including obligations expected to be paid within twelve months after the end of the annual reporting period in which employees provide services, similar to the national debt on the balance sheet date or high-quality companies in active markets Match the bond market yield

The service cost incurred by the defined benefit plan and the net interest of the net liabilities or net assets of the defined benefit plan are included in the current profit and loss or the related asset cost; the changes in the net liabilities or net assets of the defined benefit plan are included in other comprehensive Income, and will not be transferred back to profit or loss in subsequent accounting periods.

In the settlement of the defined benefit plan, the difference between the present value of the obligation of the defined benefit plan and the settlement price determined on the settlement date is used to confirm the settlement gain or loss.

3. Dismissal benefits refer to the compensation given to employees by the Group to terminate the labor relationship with employees before the expiration of the employee's labor contract, or to encourage employees to voluntarily accept reductions. For employees who have not terminated their labor contracts with the Group, but will no longer provide services to the Group in the future and cannot bring economic benefits to the Group, the Group promises to provide economic compensation that is essentially dismissal benefits, in the event of "inward retirement" Circumstances, before their official retirement date, shall be treated as dismissal benefits, and after their official retirement date, they shall be treated as post-employment benefits.

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If the Group provides employees with dismissal benefits, choose the earlier date of the following two: (a) the day that the Group inability to unilaterally withdraw the dismissal benefits provided by the termination plan or reduction proposal (b) the day of the confirmation of the Group restructuring related costs or expenses involving the payment of dismissal benefits, to recognize the employee compensation liabilities arising from dismissal benefits and include them in the current profit and loss.

For the termination benefits that are not expected to be fully paid within twelve months after the end of the annual reporting period, and for termination plans where the substantial termination is completed within one year but the compensation payment exceeds one year, the Group chooses an appropriate discount rate. The amount of dismissal benefits for the current period's profit and loss is measured by the discounted amount.

4. Other long-term employee benefits refer to all employee compensation except short-term remuneration, post-employment benefits, and dismissal benefits, including long-term paid absences, long-term disability benefits, and long-term profit-sharing plans.

If other long-term employee benefits provided by the Group to employees meet the conditions of the defined contribution plan, accounting treatment shall be carried out in accordance with the relevant provisions of the defined contribution plan. If the other long-term employee benefits provided by the Group to employees meet the conditions of the defined benefit plan, the Group shall, in accordance with the relevant provisions of the defined benefit plan, confirm and measure the net negative components of other long-term employee benefits: service costs; other long-term employee benefits net interest on liabilities or net assets; changes in re-measurement of other long-term employee benefits net liabilities or net assets. The total net amount is included in the current profit and loss or the cost of related assets.

### 4.28 Lease liability

#### 1. initial metering

The company makes an initial measurement of the lease liability based on the present value of the outstanding lease payments on the commencement date of the lease term.

##### (1) Lease payment

Lease payment refers to the amount of money paid by the Company to the lessor in relation to the right to use the leased assets during the lease term, including: a) Fixed payment and substantial fixed payment, if there is lease incentive, the amount related to lease incentive shall be deducted; b) Variable lease payments depending on the index or ratio, which are determined at the initial measurement based on the index or ratio of the commencement date of the lease term; c) The exercise price of the purchase option if the Company reasonably determines that it will exercise the purchase option; d) The lease term reflects the amount payable to exercise the termination option when the Company will exercise the option to terminate the lease; e) The amount expected to be paid based on the residual value of the guarantee provided by the Company.

##### (2) Discount rate

In calculating the present value of the lease payments, the Company uses the incremental borrowing rate as the discount rate. The incremental borrowing rate refers to the interest rate paid by the Company to borrow funds under similar collateral conditions during similar periods to obtain assets of similar value to the right to use assets under similar economic circumstances.

#### 2. Follow-up measurement

After the beginning of the lease term, the company shall make subsequent measurement of the lease liabilities in accordance with the following principles: ① Increase the carrying amount of the lease liabilities when recognizing the interest of the lease liabilities; (2) when paying the lease payment, reduce the book amount of the lease debt; ③ When the lease payment amount changes due to revaluation or lease change, the book value of the lease liability shall be re-measured.

The company calculates the interest expense of the lease liability in each period of the lease term according to the fixed periodic interest rate, and records it into the profit and loss of the current period, except those that should be capitalized. Cyclical interest rate refers to the discount rate adopted by the Company in initial measurement of lease liabilities, or the revised discount rate adopted by the Company in re-measurement of lease liabilities in accordance with the revised discount rate due to changes in lease payments or lease changes.

#### 3. Recalculate

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After the beginning of the lease term, if any of the following circumstances occur, the company shall re-measure the lease liabilities according to the present value of the changed lease payments and adjust the book value of the use-right assets accordingly. If the book value of the use-right assets has been reduced to zero, but the leasing liabilities still need to be further reduced, the company will record the remaining amount into the current profit and loss.

a) Substantial fixed payment amount changes (in this case, the original discount rate is used to discount); b) The expected amount payable of the residual value changes (in this case, the original discount rate is used to discount); c) There is a change in the index or ratio used to determine the lease payment (in which case, the revised discount rate is used to discount); d) The evaluation results of the call option change (in this case, the revised discount rate is used to discount); e) The evaluation result or actual exercise of the renewal option or termination option changes (in this case, the revised discount rate is used to discount).

### 4.29 Bonds payable

The bonds payable by the Group are measured at fair value when they are initially recognized, and related transaction costs are included in the initial recognition amount. Subsequent measurement is based on amortized cost.

The difference between the bond payment price and the total face value of the bond is treated as a bond premium or discount, which is amortized when interest is accrued using the actual interest rate method during the bond's duration, and is treated in accordance with the principle of handling borrowing costs.

### 4.30 Provisions

When the business related to contingent matters such as external guarantee, commercial acceptance bill discount, pending litigation or arbitration, product quality assurance meets the following conditions at the same time, the Group recognizes it as a liability: the obligation is the current obligation of the Group; The performance of this obligation is likely to cause economic benefits to flow out of the enterprise; the amount of this obligation can be reliably measured.

The estimated liabilities are initially measured in accordance with the best estimate of the expenditure required to perform the relevant current obligations, and comprehensively consider factors such as risks, uncertainties and time value of money related to contingencies. If the time value of money has a significant impact, the best estimate is determined after discounting the relevant future cash outflows. On each balance sheet date, the book value of the estimated liabilities is reviewed, and if there is any change, the book value is adjusted to reflect the current best estimate.

### 4.31 Preference shares, perpetual debts and other financial instruments

The Group classifies the preferred shares and perpetual debts in line with the equity instruments as financial liabilities except for equity instruments. See note 4.9, "distinction between financial liabilities and equity instruments" for relevant accounting policies.

Preferred stocks and perpetual bonds classified as debt instruments are initially measured at their fair value after deducting transaction costs, and the effective interest method is used for subsequent measurement at amortized cost. The interest expense or dividend distribution shall be recorded in accordance with the borrowing costs, and the gains or losses arising from the repurchase or redemption shall be included in the current profits and losses.

For preference shares and perpetual bonds classified as equity instruments, the consideration received at the time of issuance deducts transaction costs to increase the owner's equity, and the interest expense or dividend distribution shall be treated as profit distribution, and repurchase or cancellation shall be treated as equity changes.

### 4.32 Principles of revenue recognition

Companies that have implemented the new revenue standards in the Group have fulfilled their contractual performance obligations and recognize revenue when the customer obtains control of the relevant goods or services. Obtaining control over related goods or services means being able to lead the use of the goods or the provision of the service and obtain almost all of the economic benefits from it.

When the contract contains two or more performance obligations. At the beginning of the contract, the Group allocates the transaction price to each individual performance obligation based on the relative proportion of the stand-alone selling price of the goods or services promised by the individual performance obligation, and measures revenue based on the transaction price allocated to each individual performance obligation.



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The transaction price is the amount of consideration that the Group expects to be entitled to receive due to the transfer of goods or services to customers, excluding payments received on behalf of third parties. The transaction price confirmed by the Group does not exceed the amount at which the accumulated confirmed revenue will most likely not undergo a significant reversal when the relevant uncertainty is eliminated. It is expected that the money returned to the customer will not be included in the transaction price as a liability. If there is a significant financing component in the contract, the Group determines the transaction price based on the amount payable in cash when the customer assumes control of the goods or services. The difference between the transaction price and the contract consideration shall be amortized by the effective interest method during the contract period. On the starting date of the contract, the Group expects that the interval between the customer's acquisition of control of the goods or services and the customer's payment of the price will not exceed one year, regardless of the significant financing components in the contract.

1. When one of the following conditions is met, the Group is to perform its performance obligations within a certain period of time; otherwise, it is to perform its performance obligations at a certain point of time:
  - (1) the customer simultaneously receives and consumes the benefits provided by the Group's performance as the Group performs;
  - (2) the Group's performance creates work in progress that the customer controls as it is created
  - (3) the Group's performance does not create an asset with an alternative use to the Group and the Group has an enforceable right to payment for performance completed to date.

For performance obligations performed within a certain period of time, the Group recognizes revenue according to the performance progress within that period of time, and determines the performance progress in accordance with the input method or output method. When the performance progress cannot be reasonably determined, if the cost incurred by the Group is expected to be compensated, the revenue shall be recognized according to the amount of the cost incurred until the performance progress can be reasonably determined.

For performance obligations performed at a certain point in time, the Group recognizes revenue at the point when the customer obtains control of the relevant goods or services. When judging whether a customer has obtained control of goods or services, the Group considers the following signs:

- (1) The Group has a present right to payment for the promised goods or services, i.e. the customer is presently obliged to pay for such goods or services;
  - (2) The Group has transferred the legal title of the promised goods or services to the customer, i.e. the customer has legal title to such goods or services ;
  - (3) The Group has transferred physical possession of the promised goods or services, i.e. the customer has physical possession of such goods or services;
  - (4) The Group has transferred the significant risks and rewards of ownership of the promised goods or services to the customer, i.e. the customer has the significant risks and rewards of ownership of such goods or services
  - (5) The customer has accepted the promised goods or services, and other indicators of the transfer of control.
2. The Group lists the right to receive consideration obtained through the transfer of goods or services by customers as contract assets. Contract assets are provided for impairment on the basis of expected credit losses. The Group's unconditional right to receive consideration from customers is presented as receivables. The Group's obligation to transfer goods or services to customers after receiving consideration receivable from customers is presented as contract liabilities.

### 4.33 Government grants

Government grants refer to the monetary or non-monetary assets obtained by the Group from the government for free. Government subsidies are recognized when the Group can meet its attached conditions and can be received.

If a government subsidy is a monetary asset, it shall be measured according to the amount actually received. For subsidies paid in accordance with a fixed standard, or when there is conclusive evidence at the end of the period that it can meet the relevant conditions stipulated by the financial support policy and is expected to receive financial support funds, it shall be measured according to the amount receivable. If a government grant is a non-monetary asset, it shall be measured at its fair value. If the fair value cannot be obtained reliably, it shall be measured at its nominal amount.

The Group's government subsidies are divided into government subsidies related to assets and government subsidies related to income. Among them, government subsidies related to assets refer to government subsidies obtained by the Group for purchase and construction or to form long-term assets; government subsidies related to income refer to

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government subsidies other than those related to assets government subsidy. If the government grants comprise both grants related to assets and grants related to income, the Group shall treat them separately, and if they cannot be distinguished from each other, they shall be accounted for as government grants related to income as a whole.

For government subsidies related to assets, when government subsidies are obtained, the book value of the relevant assets shall be written off according to the amount of the subsidy funds. If the government subsidies related to assets are obtained first, and then the long-term assets purchased and constructed are recognized, the government subsidies obtained should be recognized as deferred income first, and the deferred income shall be offset the book value of assets when the relevant assets reach the intended use state. If the relevant long-term assets are put into use and then the asset-related government subsidies are obtained, under the net method, the book value of the relevant assets should be reduced when the subsidy is obtained, If the relevant long-term asset is put into use and then the asset-related government subsidy is obtained, under the net method, the book value of the relevant asset should be reduced when the subsidy is obtained, and the book value after the reduction and the remaining useful life of the relevant asset should be accrued Depreciation or amortization.

If government subsidies related to income are used to compensate related costs or losses in subsequent periods, they shall be recognized as deferred income, and related costs shall be offset during the period when the related costs or losses are recognized; If it is used to compensate related costs or losses incurred, the related costs shall be directly offset. Government subsidies related to daily activities will be used to offset related costs and expenses in accordance with the nature of economic business. Government subsidies not related to daily activities are included in non-operating income and expenditure.

#### **4.34Deferred tax assets and deferred tax liabilities**

Group deferred income tax assets and deferred income tax liabilities are calculated and confirmed based on the difference between the tax base of assets and liabilities and their book value. For deductible losses and tax deductions that can be deducted from taxable income in subsequent years according to the tax law, the corresponding deferred income tax assets are recognized as temporary differences. On the balance sheet date, deferred income tax assets and deferred income tax liabilities are measured at the applicable tax rate during the period when the asset is expected to be recovered or the liability is settled.

The Group recognizes the deferred income tax assets arising from the deductible temporary differences within the limit of the taxable income that is likely to be obtained to deduct the deductible temporary differences. For confirmed deferred income tax assets, when it is expected that it is unlikely that sufficient taxable income will be available to deduct the deferred income tax assets in the future, the book value of the deferred income tax assets shall be written down. When it is possible to obtain sufficient taxable income, the reduced amount shall be reversed.

#### **4.35Lease**

Lease refers to a contract in which the lessor transfers the right to use the asset to the lessee within a certain period of time to obtain consideration. On the starting date of the contract, it should be assessed whether the contract is a lease or includes a lease. If a party in the contract transfers the right to control the use of one or more identified assets within a certain period in exchange for consideration, the contract is a lease or includes a lease. In order to determine whether the contract transfers the right to control the use of the identified asset within a certain period, it should be assessed whether the customer in the contract has the right to obtain almost all the economic benefits arising from the use of the identified asset during the period of use, and during the period of use Have control over the identified assets.

If the contract contains multiple separate leases at the same time, the Group will split the contract and keep separate accounts. If the contract contains both lease and non-lease parts, the Company that has implemented the new lease standard of the Group will separate the lease and non-lease parts for accounting treatment.

1. The Group has implemented the new lease standards of the Company as the lessee

On the commencement date of the lease term, companies that have implemented the new lease standards of the Group recognize the right-of-use assets and lease liabilities for the lease.

Right-of-use assets are initially measured at cost. The initial cost includes the initial measurement amount of the lease liability, the lease payment paid on or before the start of the lease term (deducting the amount of lease incentives already enjoyed), the initial direct costs incurred, and the dismantling and removal of leased assets, the estimated cost of restoring the site where the leased asset is located or restoring the leased asset to the state agreed upon in the lease terms. The Group uses the straight-line method to depreciate the right-of-use assets. If it can be reasonably

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determined that the ownership of the leased asset will be obtained at the expiration of the lease term, the Group shall accrue depreciation during the remaining useful life of the leased asset. Otherwise, the leased asset is depreciated during the shorter period of the lease term and the remaining useful life of the leased asset.

Lease liabilities are initially measured based on the present value of the lease payments that have not yet been paid at the beginning of the lease term, and the discount rate is the interest rate implicit in the lease. If the interest rate implicit in the lease cannot be determined, the Group's incremental borrowing interest rate shall be used as the discount rate.

Companies that have implemented the new lease standards in the Group calculate the interest expense of the lease liability during each period of the lease term based on a fixed periodic interest rate, and include it in the current profit and loss or the cost of related assets. Variable lease payments that are not included in the measurement of lease liabilities are included in the current profit and loss or the cost of related assets when they actually occur

After the start of the lease term, if the following circumstances occur, the Group re-determines the lease payment, and remeasures the lease liability based on the present value calculated from the changed lease payment and the revised discount rate: The evaluation result relates to the purchase option, the option to renew the lease or the option to terminate the lease has changed. The actual exercise of the lease renewal option or the lease termination option is inconsistent with the original assessment result, which leads to changes in the lease term; changes in the amount expected to be payable based on the residual value of the guarantee, or changes in the index or ratio used to determine the lease payment.

When the lease liability is remeasured, the Group adjusts the book value of the right-of-use asset accordingly. If the carrying amount of the right-of-use asset is reduced to zero and there is a further reduction in the measurement of the lease liability, the Group recognizes any remaining amount of the remeasurement in profit or loss.

For short-term leases (lease term of 12 month or less) and leases of low-value assets, a simplified method is adopted. Instead of recognizing right-of-use asset and lease liability, the Group recognizes the lease payments associated with those leases as an expense or in carrying amount of relevant assets on either a straight-line basis over the lease term or another systematic basis.

### 2. The group acts as the lessor

At the commencement date, the Group classifies each of its leases as either an operating lease or a finance lease, based on the substance of the transaction. A finance lease is a lease that transfers substantially all the risks and rewards incidental to ownership of an underlying asset. An operating lease is a lease other than a finance lease.

When a company that has implemented the new lease standards of the Group acts as a sublease lessor, the sublease is classified based on the right-of-use assets generated by the original lease, rather than the underlying asset of the original lease. If the original lease is a short-term lease and the Group chooses to apply the simplified treatment of the above short-term lease to the original lease, the Group classifies the sub-lease as an operating lease.

Under finance leases, on the commencement date of the lease term, the Group confirms the finance lease receivables for the finance lease and terminates the recognition of the finance lease assets. When the Group initially measures the financial lease receivables, the net lease investment is used as the recorded value of the financial lease receivables. The net lease investment is the sum of the unguaranteed residual value and the present value of the lease payment that has not been received at the beginning of the lease term, discounted at the interest rate implicit in the lease.

Companies that have implemented the new lease standards in the Group calculate and recognize interest income for each period of the lease term based on a fixed periodic interest rate. Variable lease payments that are not included in the measurement of the net lease investment are included in the current profit and loss when they actually occur.

Under operating leases, during each period of the lease term, companies that have implemented the new lease standards of the Group adopt the straight-line method (or other systematically reasonable methods) to recognize the lease receipts from operating leases as rental income. The capitalization of the initial direct costs related to operating leases shall be amortized during the lease term on the same basis as the recognition of rental income, and shall be included in the current profits and losses in installments. Variable lease payments that are not included in the lease receipts are included in the current profit and loss when they actually occur.

### 4.36 Assets held for sale

1. The Group classifies non-current assets or disposal groups that meet the following conditions as held for sale:  
(a) According to the practice of selling such assets or disposal groups in similar transactions, they can be sold immediately under current conditions; (b) The sale is very likely to happen, that is, a resolution has been made on a

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sale plan and a confirmed purchase commitment has been obtained, and the sale is expected to be completed within one year. Relevant regulations require the approval of the relevant authority or regulatory authority before the sale may require relevant approval. Before the Group classifies non-current assets or disposal groups as held for sale for the first time, it measures the book value of non-current assets or assets and liabilities in the disposal group in accordance with relevant accounting standards. In the initial measurement or re-measurement of the non-current assets or disposal groups held for sale on the balance sheet date, if the book value is higher than the net value of the fair value minus the selling expenses, the book value shall be written down to the fair value minus The net amount after selling expenses, the written-down amount is recognized as asset impairment loss, included in the current profit and loss, and at the same time, provision for impairment of assets held for sale is made.

2. The non-current assets or disposal group acquired by the Group exclusively for resale meets the requirements of “expected to be sold within one year” on the acquisition date, and it is likely to meet the holding requirements in the short term (usually 3 months) For other classification conditions of the category for sale, it shall be classified as the category held for sale on the date of acquisition. In the initial measurement, the comparison assumes that it is not divided into the initial measurement amount under the condition of holding for sale and the net amount after fair value minus selling expenses, which is the lower of the two. Except for the non-current assets or disposal groups acquired in a business combination, the net amount of the non-current assets or disposal groups after the fair value minus the selling expenses is used as the initial measurement amount and the difference generated is included in the current profit and loss.

3. If the Group loses control of the subsidiary due to the sale of its investment in the subsidiary, regardless of whether the Group retains part of the equity investment after the sale, the investment in the subsidiary to be sold meets the criteria for the classification of holdings for sale At the time, in the parent company’s individual financial statements, the overall investment in the subsidiary is classified as held for sale, and in the consolidated financial statements, all assets and liabilities of the subsidiary are classified as held for sale.

4. If the net amount of the fair value of the non-current assets held for sale minus the selling expenses on the subsequent balance sheet date increases, the previously written-down amount shall be restored, and the assets shall be recognized after being classified as held for sale. The impairment loss is reversed within the amount, and the reversed amount is included in the current profit and loss. Asset impairment losses recognized before being classified as held for sale cannot be reversed.

5. For the amount of asset impairment loss confirmed by the disposal group held for sale, the book value of the goodwill in the disposal group is first offset, and then the book value of each non-current asset is proportionally offset according to the proportion of the book value of each non-current asset.

If the fair value of the disposal group held for sale on the subsequent balance sheet date has increased after deducting the selling expenses, the previously written down amount shall be restored, and the non-relevant measurement requirements shall be applied after being classified into the held for sale category. The amount of asset impairment losses recognized by current assets is reversed, and the reversed amount is included in the current profit and loss. The book value of the goodwill that has been deducted and the asset impairment losses recognized before the non-current assets are classified as held for sale shall not be reversed.

The subsequent reversal of the asset impairment loss confirmed by the disposal group held for sale is based on the proportion of the book value of each non-current asset in the disposal group, except for goodwill, to increase its book value in proportion.

6. The non-current assets held for sale or non-current assets in the disposal group are not depreciated or amortized, and the interest and other expenses of the liabilities in the disposal group held for sale continue to be recognized.

7. The non-current assets held for sale or the disposal group are no longer classified into the held for sale category or the non-current assets from the disposal group held for sale because they no longer meet the classification conditions of the held for sale category When removed, it is measured according to the lower of the following two: (1) The book value before being classified as held for sale, and the depreciation, amortization or impairment that should have been recognized under the assumption that it is not classified as held for sale Wait for the adjusted amount; (2) The recoverable amount.

8. When derecognizing non-current assets or disposal groups held for sale, the unrecognized gains or losses shall be included in the current profits and losses.

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### 4.37 Fair value measurement

#### 1 Initial measurement of fair value

For assets and liabilities measured at fair value, the Group takes into account the characteristics of the asset or liability, uses the amount that can be received from the sale of an asset or the transfer of a liability in a transaction that occurs on the measurement date by market participants, to measure the fair value. When the relevant assets or liabilities are measured at fair value, the transaction in which market participants sell assets or transfer liabilities on the measurement date is an orderly transaction under current market conditions. Orderly transactions for the sale of assets or the transfer of liabilities are carried out in the main market for the relevant assets or liabilities. If there is no major market, it is assumed that the transaction is conducted in the most favorable market for the relevant asset or liability; the assumption used by market participants to maximize their economic benefits when pricing the asset or liability is adopted. When measuring non-financial assets at fair value, consider the ability of market participants to use the asset for the best purpose to generate economic benefits, or to sell the asset to other market participants who can be used for the best purpose to generate economic benefits.

#### 2 Valuation method

When determining the fair value used to measure assets or liabilities, the Group uses valuation techniques that are appropriate in the circumstances and for which sufficient data and other supporting information are available to measure fair value. The valuation techniques used are the market approach, the income approach and the cost approach. When determining the fair value used to measure assets or liabilities, the Group uses valuation techniques that are appropriate in the circumstances and for which sufficient data and other supporting information are available to measure fair value. The valuation techniques used are the market approach, the income approach and the cost approach. In the application of valuation technology, priority should be given to the use of relevant observable input values. Only when the relevant observable input values cannot be obtained or it is not feasible to obtain, the non observable input values should be used.

#### 3 Levels of fair value

The Group determines the level of fair value measurement results according to the lowest level of input value which is of great significance to fair value measurement as a whole. Level 1 inputs are quoted unadjusted prices in active markets for the identical assets or liabilities that the Group can access at the measurement date. Active market is a market in which transactions for the asset or liability take place with sufficient frequency and volume to provide pricing information on an ongoing basis. Level 2 inputs are inputs other than quoted prices included within Level 1 that are observable for the asset or liability. Level 3 inputs are unobservable inputs for the asset or liability.

### 4.38 Branch information

The Group determines operating segments based on internal organizational structure, management requirements, and internal reporting systems, and determines reporting segments based on operating segments and discloses segment information. An operating segment refers to a component within the Group that meets the following conditions at the same time: the component can generate income and expenses in daily activities; the management of the Group can regularly evaluate the operating results of the component, And decide to allocate resources to it and evaluate its performance; the Group is able to obtain relevant accounting information such as the financial status, operating results and cash flow of the component. If two or more operating segments have similar economic characteristics and meet certain conditions, they can be combined into one operating segment.

The inter-segment transfer price is determined with reference to the market price, and the common expenses are distributed among the different segments in proportion to the income except for the parts that cannot be reasonably distributed.

## Note 5 Changes in Accounting Policies and Accounting Estimates and Corrections of Accounting Errors

### 5.1 Changes in accounting policy

#### 1. New Financial instruments guidelines

In 2017, the Ministry of Finance issued the Accounting Standards for Business Enterprises No. 22 - Recognition and Measurement of Financial Instruments (Amendment), Accounting Standard for Business Enterprises No. 23 - Transfer of Financial Assets (Amendment) Accounting Standard for Business Enterprises No. 24 - Hedge Accounting (Amendment) and Accounting Standards for Business Enterprises No. 37 - Presentation of Financial Instruments

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(Revision) (Hereinafter referred to as the "New Financial Instruments Criteria"). In addition to the listed subsidiaries of the Company including Aluminum Corporation of China Ltd., Ningxia Yin Xing Energy Co.,Ltd.,Yunnan Copper Co.,Ltd., Yunnan Chihong Zinc and Germanium Co.,Ltd., Chinalco International Engineering Co.,Ltd., and Yunnan Copper Technology Development Co.,Ltd., a listed company of the New Third Board, which have implemented the new financial instrument standards as required, The Company and other affiliated companies have implemented the new financial instrument Standards since January 1, 2021, and adjusted the relevant content of accounting policies.

**2. New revenue criteria**

In 2017, the Ministry of Finance issued Accounting Standard for Business Enterprises No. 14 - Revenue (2017 Revision) (Accounting [2017] No. 22) (The "New Revenue Criteria"). In addition to the listed subsidiaries of the Company, Aluminum Corporation of China, Yunnan Copper Co.,Ltd., Yunnan Chi Hong Zinc and Germanium Co.,Ltd., Chinalco International Engineering Co.,Ltd., and Yunnan Copper Science and Technology Development Co.,Ltd., which are listed on the New Third Board, have already implemented the new revenue criteria. The Company and other affiliated companies will implement the new revenue standards from January 1, 2021, and adjust the relevant content of the accounting policy.

**3. New tenancy criteria**

Accounting Standards for Business Enterprises No. 21 - Leases (Amendment) issued by the Ministry of Finance in 2018 (the "New Lease Standards"), the company's listed subsidiaries aluminum Corporation of China, Yin Xing Energy Co.,Ltd and Chinalco International Engineering Co.,Ltd have implemented the new lease standards. The company and other affiliated companies have implemented the new leasing standards since January 1, 2021, and adjusted the relevant contents of accounting policies.

The impact of the company's implementation of the new financial instrument standards, new revenue standards and new leasing standards on the items in the consolidated statements as of January 1, 2021 is summarized as follows:

<b>Affected items</b>	<b>31 December 2020 Amount (before change)</b>	<b>The amount of adjustment</b>	<b>January 1, 2021 Amount (after change)</b>
<b>Asset item</b>			
Monetary fund	48,787,804,494.63	781,502.09	48,788,585,996.72
Trading financial assets	177,069,820.52	977,040,683.73	1,154,110,504.25
Financial assets measured at fair value and whose changes are recorded in current profits and losses	419,994,097.62	-419,994,097.62	
Notes receivable	1,839,215,235.24	-1,560,775,861.85	278,439,373.39
Accounts receivable	19,608,209,220.09	-192,692,879.32	19,415,516,340.77
Receivables financing	5,401,381,367.75	1,560,775,861.85	6,962,157,229.60
Prepayments	4,286,774,502.97	-15,559,492.42	4,271,215,010.55
Other accounts receivable	9,426,643,267.64	-88,764,174.84	9,337,879,092.80
inventory	51,905,013,913.97	-217,037,927.77	51,687,975,986.20
Contract assets	7,280,336,107.50	391,679,584.41	7,672,015,691.91
Non-current assets that mature within one year	3,528,946,949.91	-11,012,949.98	3,517,933,999.93
Other current assets	7,700,071,439.10	8,610,292.94	7,708,681,732.04
Disburse loans and advances	46,295,000.00	44,178,448.62	90,473,448.62
Financial assets available for sale	114,738,129,049.62	-114,738,129,049.62	
Other debt investments		5,156,004,130.00	5,156,004,130.00
Long-term receivables	6,184,570,894.94	-12,689,037.77	6,171,881,857.17
Other equity instrument investments	1,267,485,649.10	99,370,507,582.26	100,637,993,231.36
Other non-current financial assets	54,858,959.00	27,609,444.54	82,468,403.54

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Affected items	31 December 2020 Amount (before change)	The amount of adjustment	January 1, 2021 Amount (after change)
Fixed assets	205,449,301,071.63	-278,054,513.14	205,171,246,558.49
Right assets	1,545,952,094.56	1,765,107,570.63	3,311,059,665.19
Intangible assets	57,405,516,709.18		57,405,516,709.18
The development of spending	194,251,430.74		194,251,430.74
Long-term deferred expenses	1,856,362,466.09	-49,490,287.40	1,806,872,178.69
Deferred income tax assets	4,365,905,948.70	17,480,147.50	4,383,386,096.20
Other non-current assets	17,263,262,229.97	38,221,362.96	17,301,483,592.93
<b>liabilities</b>			
Short-term borrowing	91,491,438,773.21	104,455,573.64	91,595,894,346.85
Transactional financial liabilities	44,563,787.86	129,214,479.29	173,778,267.15
Financial liabilities measured at fair value and whose changes are recorded in current profits and losses	129,214,479.29	-129,214,479.29	
Accounts payable	38,188,978,014.99	-559,926.64	38,188,418,088.35
Advance payment	2,117,614,830.66	-1,882,959,268.10	234,655,562.56
Contract liability	4,552,183,008.70	1,755,875,199.57	6,308,058,208.27
Other payables	16,845,011,874.84	-186,825,996.89	16,658,185,877.95
Non-current liabilities that mature within one year	34,324,615,336.53	136,304,552.41	34,460,919,888.94
Other current liabilities	27,600,865,934.73	133,403,993.08	27,734,269,927.81
Long-term borrowing	115,821,513,170.92	61,520,760.75	115,883,033,931.67
Lease liability	115,380,703.60	1,333,655,407.89	1,449,036,111.49
Long-term payables	2,669,454,902.03	-50,245,756.23	2,619,209,145.80
Estimated debts	3,674,558,437.06	19,305,451.00	3,693,863,888.06
Deferred income tax liabilities	5,043,151,516.51	706,930,212.83	5,750,081,729.34
Owner's equity			
Other comprehensive income	-6,216,875,244.69	-11,435,023,491.53	-17,651,898,736.22
Undistributed profit	-58,660,489,325.97	460,325,395.30	-58,200,163,930.67
Minority equity	118,286,330,997.92	617,634,232.72	118,903,965,230.64

**5.2 Change and impact of accounting estimates**

The Group has no significant change in accounting estimates for the year.

**5.3 Significant prior error correction and impact**

The Group has no significant prior error correction this year

**5.4 Other initial adjustment notes**

The company's subsidiary in China aluminum group high-end manufacturing co., LTD. According to the company's future plans to enter the capital market development strategy, by the aluminum group of China high-end manufacturing co., LTD. Management approval, China aluminum group of high-end manufacturing co., LTD. Of aluminum processing special equipment research and development spending and fixed asset accounting adjustment, And the financial data from January 1, 2020 are restated. The aforementioned matters affect the decrease of fixed assets by RMB 245,622,335.63, intangible assets by RMB 286,633,785.81 and development expenses by RMB 359,321,967.44. The

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undistributed profit decreased by 369,329,606.97 yuan, and minority shareholders' equity decreased by 522,248,481.91 yuan.

### Note 6 Tax

#### 6.1 Major categories of taxes and tax rates

Category of Tax	Tax Basis	Tax Rate
VAT (Value added tax)	The tax payable is calculated by multiplying the taxable sales by the applicable tax rate and deducting the balance of the input tax that is allowed to be deducted in the current period.	3%, 5%, 6%, 9%, 13% or tax-free
Corporate income tax	Taxable income	9%、12%、12.5%、15%、16.5%、17%、20%、24.94%、25%、27%、30%、35% or tax-free
Urban maintenance and construction tax	Turnover tax actually paid	1%, 5% or 7%
Education surcharge	Calculated based on the actual payment of turnover tax	3% or 5%
Local education surcharge	Calculated based on the actual payment of turnover tax	2% or 3%
Property tax	Rental income or residual value of the property	1.2%, 12%
Resource tax	Ad valorem based on sales	According to the tax standard approved by different local tax authorities
Other taxes	As per relevant national regulations	

#### 6.2 Tax incentives and approval documents

##### 1. Corporate Income Tax Preferences for the Western Development Strategy

On April 23, 2020, the Ministry of Finance, taxation, and the National Development and Reform Commission issued in 2020, 23 on the announcement of continuation of the western development policy of enterprise income tax, since January 1, 2021 to December 31, 2030, in the western region conform to that stipulated in the "catalogue of encouraged industries in the western region of industrial projects as the main business, Moreover, if its main business income accounts for more than 60% of the total income of the enterprise, the enterprise income tax will be levied at the tax rate of 15%.

On January 18, 2021, Order No. 40 of the National Development and Reform Commission of the People's Republic of China of 2021, Catalogue of Encouraged Industries in Western China (2020 Edition) was issued and will come into force on March 1, 2021.

(1) In Aluminum Corporation of China Limited, a subsidiary of the company, if some branches and subsidiaries located in the western region meet the above-mentioned industry catalog items, they will enjoy the western development enterprise income tax reduction at reduced rate 15%.

(2) In the following affiliation of the China Copper Co., Ltd., a subsidiary of the company, if the business complies with the above-mentioned industry catalog items, then they can enjoy the preferential policy at reduced rate 15% in corporate income tax for the development of the western region this year: Yunnan Copper Co., Ltd., Liangshan Mining Co., Ltd., Qinghai Hongxin Mining Co., Ltd., Chifeng Yuntong Nonferrous Metal Co., Ltd., Chuxiong Dianzhong Nonferrous Metal Co., Ltd., Yunnan Diqing Nonferrous Metals Co., Ltd., Yimen Copper Co., Ltd., Yunnan Chuxiong Mining and Metallurgy Co., Ltd., Yunnan Chuxiong Mining and Metallurgy Co., Ltd., Xinbaerhuyouqi Yishengyuan



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Mining Co., Ltd., Yiliang Chihong Mining Co., Ltd. Company, Yunnan Chihong Resources Comprehensive Utilization Co., Ltd., Yunnan Chihong Zinc and Germanium Co., Ltd., Heqing Yixin Aluminum Co., Ltd., Xizang Chihong Mining Co., Ltd.

(3) In the following affiliation of the Chinalco High End Manufacturing Co., Ltd., a subsidiary of the company, if the business complies with the above-mentioned industry catalog items, then they can enjoy the preferential policy at reduced rate 15% in corporate income tax for the development of the western region this year: Chongqing Southwest Aluminum Precision Processing Co., Ltd., Chongqing Southwest Aluminum Alloy Processing Research Institute Co., Ltd., Chongqing Southwest Aluminum Electromechanical Equipment Engineering Co., Ltd., Chongqing Southwest Aluminum Transportation Co., Ltd., Chinalco Southwest Plate and Strip Co., Ltd., Chinalco Sapa Special Aluminum (Chongqing) Co., Ltd., and Southwest Aluminum (Group) Co., Ltd.

(4) In the following affiliation of the Chinalco Aluminum Environmental Protection and Energy Conservation Group Co., Ltd., a subsidiary of the company, if the business complies with the above-mentioned industry catalog items, then they can enjoy the preferential policy at reduced rate 15% in corporate income tax for the development of the western region this year: Yunnan Keli Environmental Protection Co., Ltd.

### 2. Income tax incentives for high-tech enterprises

According to Article 28 of the Presidential Decree No. 63 of the People's Republic of China on Enterprise Income Tax Law, high-tech enterprises that need to be supported by the state are subject to a reduced corporate income tax rate of 15%.

(1) The following affiliation of Aluminum Corporation of China Limited., a subsidiary of the company, has passed the identification of high-tech enterprises, and enjoy the preferential policy at reduced rate 15% in income tax for high-tech enterprises this year: Baotou Aluminum Co., Ltd., Chalco Zhengzhou Research Institute of Nonferrous Metal Co., Ltd., Zhengzhou Haisai High-tech Ceramics Co., Ltd., Chinalco Shandong Co., Ltd., Chalco Shandong New Material Co. LTD, Henan Hua Hui Nonferrous Engineering Design Co., Ltd, Chalco Zhongzhou Aluminum Co., LTD., Chalco Zhongzhou New Material Technology Co., LTD., Chalco Qingdao Light Metal Co., LTD., Zunyi Aluminum Co., LTD., and Shanxi Chalco China Resources Co., LTD.

(2) The following affiliation of China Copper Co., Ltd, a subsidiary of the company, has passed the identification of high-tech enterprises, and enjoy the preferential policy at reduced rate 15% in income tax for high-tech enterprises this year: Yunnan Yuntong Zinc Industry Co., Ltd., Yunnan Copper Technology Development Co., Ltd., Fumin Xinye Industry and Trade Co., Ltd., Yuxi Mining Co., Ltd., Yunnan Wenshan Aluminum Co., Ltd., Qujingyun Aluminum Luoxin Aluminum Co., Ltd., Yunnan Yun Aluminum Runxin Aluminum Co., Ltd., Yunnan Yunlv Haixin Aluminum Co., Ltd., Yunnan Haoxin Aluminum Foil Co., Ltd., Yunnan Yun Aluminum Yongxin Aluminum Co., Ltd. , Yunnan Yuanxin Carbon Co., LTD., Yunnan Yunal Zexin Aluminum Co., LTD., Yunnan Yongchang Lead-Zinc Co., Ltd., Chihong Technology Engineering Co., Ltd., Hulunbeier Chihong Mining Co., Ltd., Yunnan Wenshan Dounan Manganese Co., Ltd., Kunming Metallurgical Research Institute Co., Ltd., Kunming Nonferrous Metallurgy Design and Research Institute Co., Ltd., Yunnan Metallurgical Renda Information Technology Industry Co., Ltd., Yunnan Metallurgical Resources Co., Ltd., China Copper Huazhong Copper Industry Co., Ltd.

(3) The following affiliation of China Aluminum International Engineering Corporation Limited., a subsidiary of the company, and Chinalco International Engineering Co itself, has all passed the identification of high-tech enterprises, and enjoy the preferential policy at reduced rate 15% in income tax for high-tech enterprises this year: Changsha Nonferrous Metallurgical Design and Research Institute Co., Ltd., Huachu Intelligent Technology (Hunan) Co., Ltd., China Nonferrous Metals Processing Technology Co., Ltd., Guiyang Aluminum and Magnesium Design Institute Co., Ltd, Guizhou Shunan Mechanical and Electrical Equipment Co., Ltd., Guiyang Zhenxing Aluminum Magnesium Technology Industry Development Co., Ltd., Guizhou Innovation Light Metal Process Equipment Engineering Technology Research Center Co., Ltd, Shenyang Aluminum and Magnesium Engineering and Research Institute Co., Ltd, Shenyang Boyu Technology Co., Ltd., Shenyang Aluminum Magnesium Technology Co., Ltd., Beijing Huayu Tiankong Technology Co., Ltd., China Nonferrous Metals Changsha Investigation and Design Research Institute Co., Ltd., Shenzhen Changkan Survey and Design Co., Ltd., The Sixth Metallurgical Construction Company of China National Nonferrous Metals Industry, Ninth Metallurgical Construction Co., Ltd., Twelfth Metallurgical Construction Company of China National Nonferrous Metals Industry, China Nonferrous Metals Industry Kunming Survey and Design Institute Co., Ltd., Chinalco Shandong Engineering Technology Co., Ltd.

(4) The Chinalco Materials Application Research Institute Co., Ltd, a subsidiary of the company, has passed the identification of high-tech enterprises, and enjoy the preferential policy at reduced rate 15% in income tax for high-tech enterprises this year.

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(5) The following affiliation of Chinalco High-end Manufacturing Co., Ltd., a subsidiary of the company, has passed the identification of high-tech enterprises, and enjoy the preferential policy at reduced rate 15% in income tax for high-tech enterprises this year: Northeast Light Alloy Co., Ltd., Northwest Aluminum Co., Ltd., Chinalco Ruimin Co., Ltd., Harbin Dongqing Special Material Co., Ltd., China Aluminum Southeast Institute of Materials (Fujian) Technology Co., Ltd.

(6) The following affiliation of China Rare Earth & Metals Corporation Limited, a subsidiary of the company, has passed the identification of high-tech enterprises, and enjoy the preferential policy at reduced rate 15% in income tax for high-tech enterprises this year: Chalco Guangxi Nonferrous Gold Source Rare Earth Co. LTD, Jiangsu Guosheng New Material Co., Ltd., Chinalco Guangxi Guosheng Rare Earth Development Co., Ltd., Chinalco Rare Earth (Jiangsu) Co., Ltd., Chinalco Rare Earth (Changshu)Co., Ltd., Chinalco Rare Earth (Changzhou)Co., Ltd, Zhongxi (Weishan) Rare Earth New Materials Co., LTD., Shandong Weishan Lake Rare Earth Co., LTD., Steel Research Group Rare Earth Technology Co., LTD.

(7) The company's subsidiary unit of Henan Great Wall Information Technology Co., LTD., a subsidiary of Chinalco Asset Management Co., LTD Henan Changxing Industry Co., LTD., Hangzhou Neite Valve Co., LTD., and Chalco Lubrication Technology Co., LTD, through the recognition of hi-tech enterprises, in the year to enjoy a high and new technology enterprise income tax shall be levied at a reduced 15% preferential policies.

### 3. Income tax incentives for small and low-profit enterprises

According to Article 28 of the Presidential Decree No. 63 of the People's Republic of China on Enterprise Income Tax Law of the People's Republic of China, eligible small and low-profit enterprises will be levied corporate income tax at a reduced rate of 20%.

(1) The following affiliation of China Copper Co., Ltd, a subsidiary of the company, has met the standards for small and low-profit enterprises, and enjoy a reduced rate 15% in income tax for small and low-profit enterprises this year: Huangshi Huazhong Copper Jindi Technology Co., Ltd.

(2) The following affiliation of China Aluminum International Engineering Corporation Limited., a subsidiary of the company, has met the standards for small and low-profit enterprises, and enjoy a reduced rate 15% in income tax for small and low-profit enterprises this year: China Nonferrous Metals Shanxi No. 12 Metallurgical Material Trade Co., Ltd., China Nonferrous Metals No. 12 Metallurgical Chongqing Energy Conservation Technology Co., Ltd., China Nonferrous Metals No. 12 Metallurgical New Material Co., Ltd., Guiyang Xinyu Supervision Co., Ltd., Kunming Prospecting Institute Technology Development Co., Ltd., Luoyang Jincheng Construction Supervision Co., Ltd., Hunan Huachu Project Management Co., Ltd.

(3) The following affiliation of Chinalco Capital Holdings Limited, a subsidiary of the company, has met the standards for small and low-profit enterprises, and enjoy a reduced rate 15% in income tax for small and low-profit enterprises this year: Chinalco Jianxin Investment Fund Management (Beijing) Co., Ltd., Chinalco Innovation and Development Equity Investment Fund Management (Beijing) Co., Ltd.

(4) The following affiliation of Chinalco Environmental Protection and Energy Conservation Group Co., Ltd, a subsidiary of the company, has met the standards for small and low-profit enterprises, and enjoy a reduced rate 15% in income tax for small and low-profit enterprises this year: Ningxia Fenghao Power Distribution Co., Ltd.

(5) The following affiliation of Chinalco High-end Manufacturing Co., Ltd., a subsidiary of the company, has met the standards for small and low-profit enterprises, and enjoy a reduced rate 15% in income tax for small and low-profit enterprises this year: China Nonferrous Metals Import and Export Harbin Co., Ltd., Harbin Dong Light Longxiang Packing Co., Ltd., Harbin Northeast Aluminum Co., Ltd.

(6) The following affiliation of Chinalco Asset Management Company, a subsidiary of the company, has met the standards for small and low-profit enterprises, and enjoy a reduced rate 15% in income tax for small and low-profit enterprises this year: Guizhou Guilv Technical Service Co., Ltd., Zhuhai Yachi Paper plastic Products Co., LTD. Guizhou Chalco Genting Tourism Development Co., LTD, Guizhou Guilv Modern City Service Co., Ltd.

### 4. Income tax policy for overseas subsidiaries

The overseas subsidiaries of the company shall pay corporate income tax at the local income tax rate in accordance with the relevant laws and regulations of the place where the company is registered. The details are as follows:

No	Enterprise Name	Registered location	Applicable tax rate
1	Chinalco Hong Kong Co., Ltd	Hong Kong Special Administrative Region of China	16.50%

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No	Enterprise Name	Registered location	Applicable tax rate
2	Chinalco Energy Holdings Co., Ltd.	Hong Kong Special Administrative Region of China	16.50%
3	Chalco Guinea Company	Boffa, Republic of Guinea	Exemption
4	Boffa Port Investment Co., Ltd.	Hong Kong Special Administrative Region of China	16.50%
5	Chinalco Guinea Port Co., Ltd.	Boffa, Republic of Guinea	Exemption
6	Chinalco International Trade Hong Kong Co., Ltd.	Hong Kong Special Administrative Region of China	16.50%
7	Chinalco International Trade Singapore Co., Ltd.	Singapore	17.00%
8	Yuntong Hong Kong Co., Ltd.	Hong Kong Special Administrative Region of China	16.50%
9	China Yuntong (Australia) Investment and Development Co., Ltd.	Australia	30.00%
10	Lao Cement Co., Ltd.	Lao People's Republic	35.00%
11	Yungang Metal Co., Ltd.	Hong Kong Special Administrative Region of China	16.50%
12	China Copper Resources Investment Co., Ltd.	The British Virgin Islands	Tax free
13	Chinalco Mining Corporation International	Cayman Islands	Tax free
14	Chinalco Peru Copper Company	Peru	29.5%
15	Yunlv International Co., Ltd.	Hong Kong Special Administrative Region of China	16.50%
16	Chihong Luxembourg Co., Ltd.	Luxembourg	24.94%
17	Chihong Selwin Mining Co., Ltd.	Canada	27.00%
18	Chihong (Hong Kong) International Investment Co., Ltd.	Hong Kong Special Administrative Region of China	16.50%
19	Chihong (Hong Kong) International Mining Co., Ltd.	Hong Kong Special Administrative Region of China	16.50%
20	Bolivia D Copper Mine Co., Ltd.	La Paz, Bolivia	25.00%
21	Bolivia Yangfan Mining Co., Ltd.	La Paz, Bolivia	25.00%
22	Bolivia Amazon Mining Co., Ltd.	La Paz, Bolivia	25.00%
23	Chihong International Mining Co., Ltd.	Australia	30.00%
24	Hong Kong West Aluminum Co., Ltd.	Hong Kong Special Administrative Region of China	16.50%
25	Chinalco International Engineering (India) Private Co., Ltd.	India	30.00%
26	Chinalco International 12MCC Construction Co., Ltd.	Korea	25.00%
27	Chinalco International Hong Kong Company	Hong Kong Special Administrative Region of China	16.50%
28	Chinalco International Malaysia Company	Malaysia	25.00%
29	Africa Congo (Kinshasa) Company of China Nonferrous Metals Research Institute	Hong Kong Special Administrative Region of China	15.00%
30	Chinalco Overseas Holdings Co., Ltd.	Hong Kong Special Administrative Region of China	16.50%
31	Oriental Prospect Pte, Ltd.	Singapore	17.00%
32	Shining Prospect Pte, Ltd.	Singapore	17.00%
33	Chinalco Iron Mine Holdings Co., Ltd.	Hong Kong Special Administrative Region of China	16.50%
34	Chinalco Asset Holding Company	The British Virgin Islands	Tax free
35	Chinalco Capital Holdings Limited	The British Virgin Islands	Tax free

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Note: According to the "Mining Agreement" signed by the company's subsidiary Aluminum Corporation of China Limited and the Guinean government, the Chinalco Guinea Co., Ltd. and Chinalco Guinea Port Co., Ltd. of the Boffa project will pay the corporate income tax at the end of the first calendar year after the project is put into production 6 years. China Aluminum Guinea Co., Ltd. and China Aluminum Guinea Port Co., Ltd. have been converted into production this year and are still in the exemption period this year.

### 5. Other income tax incentives

(1) The company subsidiary of China aluminum industry co., LTD. The unit up new material co., LTD. Guangxi China based on January 13, 2014, general office of the people's government of the Guangxi Zhuang Autonomous Region of Guangxi ZhengFa (2014) 5, the revision about the continuation of the people's government of the Guangxi Zhuang Autonomous Region, and to promote Guangxi Beibu Gulf Economic Zone opening development several policy notice the provisions of the regulations For newly established state-encouraged industrial enterprises whose main business income accounts for more than 50% of the total income, from the tax year in which the project obtains the first production and operation income, the enterprise income tax which belongs to the local share part will be exempted from the first year to the fifth year, and halved from the sixth year to the seventh year. Guangxi Huasheng New Material Co., Ltd. was established in 2017. As of the first quarter of 2021, it enjoys the tax preference of partial reduction and exemption of corporate income tax by local sharing, so the comprehensive tax rate is 15%. Starting from the second quarter of 2021, China will enjoy a preferential income tax rate of 15% for the development of western China. Meanwhile, the enterprise income tax, which belongs to the share of local governments, will be exempted, with a comprehensive tax rate of 9%.

(2) The company's subsidiary in China aluminium co., LTD., the unit of Ningxia Silver Star Power Generation Co., LTD. According to the Ningxia Hui Autonomous Region Business Hall File (Ning sends [2018] no. 34), the relevant provisions of the Ningxia Hui Autonomous Authority for Enterprises of the National Autonomous Areas shall be the payment of enterprise income tax is a place to share. Starting from the first year of its business income, the local share of its enterprise income tax shall be reduced or exempted for the first three years. In 2021 and 2020, the local income tax will be reduced by 40%. According to the Ningxia Hui Autonomous Region Investment Preferential Policy (Revised) (Ning ZhengFa [2012] no. 97), the relevant provisions of the new industrial enterprise that belongs to the encouraged or new industrial projects, in addition to enjoy the preferential tax rate of the development of the western region, from the first income tax year, 1 to 3 years shall be exempted from enterprise income tax share some place. From the fourth year to the sixth year, the local share of enterprise income tax will be halved. Ningxia Silver Star Power Generation Co., Ltd. will enjoy the local share of local income tax by half in 2021 and 2020.

(3) For some subsidiaries or projects of Chinalco Ningxia Energy Group Co., Ltd., affiliated to Aluminum Corporation of China., which is a subsidiary of the Company, are in accordance with the "Regarding Issues Concerning the Implementation of the List of Preferential Enterprise Income Taxes for Public Infrastructure Projects" issued by the Ministry of Finance and the State Administration of Taxation "Notice" (Caishui [2008] No. 46). The investment and operation income of these infrastructure project approved after January 1 2008 are exempt from the corporate income tax from the first year to the third year since the tax year in which the first production and operation income is obtained. The corporate income tax will be exempt from the third year, and will be reduced by half from the fourth to the sixth year. The tax exemption status of each item is as follows:

Project Name	Exemption period	Halving period
Ningxia Yin Xing Energy Co.,Ltd	2016-2018	2019-2021
Wuzhong Sun Mountain Wind Farm Phase VI	2018-2020	2021-2023
Zhu chuang project	2018-2020	2021-2023
Alxa Left Banner 200MW Wind power project	2020-2022	2023-2025

(4)The desulfurization operation of following affiliation of Chinalco Environmental Protection and Energy Conservation Group Co., Ltd, a subsidiary of the company, complies with the "Coal-fired Power Plant Smoke" in the "Environmental Protection, Energy-saving and Water-saving Project Enterprise Income Tax Preferential Catalogue (Trial)" jointly issued by the Ministry of Finance, the State Administration of Taxation, and the National Development and Reform Commission and approved by the State Council: Baotou Branch, Lanzhou Branch, Linyi Branch, Ningdong Branch and Guyuan Branch under Beijing Aluminum Energy Qingxin Environmental Technology Co., Ltd. According to the

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relevant regulations of the "Gas Desulfurization Technical Transformation Project", corporate income tax of these companies will be exempt from 2016 to 2018, and corporate income tax will be halved from 2019 to 2021.

### 6. Value-added tax preference

(1) According to the "Notice of the Ministry of Finance and the State Administration of Taxation on Gold Taxation Policy Issues" (Caishuizi [2002] No. 142), the gold sold by Yunnan Copper Co., Ltd., affiliated to China Copper Co., Ltd., which is a subsidiary of the Company, is exempt from value-added tax if no physical delivery occurs through the gold exchange; if the physical delivery occurs, the policy of immediate and refund of value-added tax will be implemented, and the city maintenance and construction tax and educational surcharge will be exempted;

According to the "Notice on the Catalogue of Value-Added Tax Preferences for Products and Services for Comprehensive Utilization of Resources" (Caishui [2015] No. 78) document issued by the Ministry of Finance and the State Administration of Taxation, and verified by the Yunnan Provincial Economic Commission, enterprises use sulfur dioxide flue gas to produce sulfuric acid, Ammonium sulfate products and gold, silver, selenium, platinum, palladium, and tellurium products produced from wet anode mud are products of comprehensive utilization of resources encouraged by the state, and enjoy the preferential tax policy of immediate refund of value-added tax. That is, sulfuric acid and ammonium sulfate products are refunded at 50%, and gold, silver, selenium, platinum, palladium, and tellurium products are refunded at 30%.

According to the regulations of Guoshuifa [2007] No. 67 and Caishui [2007] No. 92, Chifeng Yuntong Nonferrous Metals Co., Ltd., affiliated to China Copper Co., Ltd., which is a subsidiary of the company, enjoys preferential tax policies for promoting the employment of persons with disabilities: The actual number of persons with disabilities placed by the unit is subject to a VAT refund upon collection, but the maximum shall not exceed 35,000 yuan per person per year.

(2) According to the provisions of the State Administration of Taxation Caishui [2002] No. 142 document, gold production and business units selling non-standard gold and gold ore (including half-live gold) are exempted from value-added tax. The gold produced by Yunnan Chihong Zinc and Germanium Co., Ltd., a subsidiary of China Copper Co., Ltd., which is a subsidiary of the company, is non-standard gold and is a value-added tax exempt product.

According to the relevant regulations of Caishui [2015] No. 78, the sulfuric acid products produced by Yunnan Chihong Zinc and Germanium Co., Ltd, affiliated to China Copper Co., Ltd., which is a subsidiary of the company, are by-products of flue gas production produced by industrial enterprises, and the concentration is higher than 15 %, enjoy the policy of 50% refund upon collection of value-added tax.

According to the relevant regulations of Caishui [2015] No. 78 Document, Yunnan Chihong Zinc and Germanium Co., Ltd., affiliated to China Copper Co., Ltd., which is a subsidiary of the company, enjoy the tax refund policy: The value-added tax realized by the production and sales of silver and bismuth, and the value-added tax realized by the use of soot produced zinc ingots enjoy the preferential tax policy of 30% upon collection and refund.

(3) According to the "Notice of the Ministry of Finance and the State Administration of Taxation on Incorporating Railway Transport and Postal Services into the Pilot Business Tax Reform to Value-Added Tax" (Caishui [2013] No. 106), the company's subsidiary China Aluminum International Engineering Corporation Limited. and its technology transfer income obtained by the affiliated unit, China Nonferrous Metals Processing Technology Co., Ltd., is exempt from VAT.

(4) According to the "Notice on Value-Added Tax Policies for Software Products" issued by the Ministry of Finance and the State Administration of Taxation (Caishui [2011] No. 100), Guiyang Zhenxing Aluminum Magnesium Technology Industry Development Co., Ltd. and Guizhou Innovative Light Metal Process Equipment Engineering Technology Research Center Co., Ltd., two subsidiaries of the China Aluminum International Engineering Corporation Limited., enjoying the following policy: The part of the actual tax burden of selling self-produced software exceeding 3% enjoys the preferential tax policy of immediate refund of value-added tax.

(5) Twelfth Metallurgical Construction Company of China National Nonferrous Metals Industry, a subsidiary of China Aluminum International Engineering Corporation Limited., which is a subsidiary of the company, obtained the tax exemption filing for cross-border taxable activities of general taxpayers in May 2017. According to the "Notice on Launching the Program of Changing Business Tax to VAT" (Caishui [2016] No. 36), domestic units and individuals providing construction services overseas can be temporarily exempted from VAT.

(6) According to the notice of the Ministry of Finance and the State Administration of Taxation on the issuance of the "Resource Comprehensive Utilization Products and Services Value-Added Tax Preferential Catalogue" (Caishui



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[2015] No. 78), taxpayers sell self-produced resource comprehensive utilization products and provide comprehensive resource utilization labor services, can enjoy the VAT refund policy. China Rare Earth&Metals (Guangxi) Jinyuan Rare Earth New Materials Co., Ltd, affiliated to China Rare Earth&Metals Co., Ltd., the company's subsidiary chinalco asset Management Co., Ltd. belongs to henan Xinshang Technology Co., Ltd. which is a subsidiary of the company, applies the policy of immediate refund of value-added tax on products for comprehensive utilization of resources and provision of labor services for comprehensive utilization of resources.

(7) According to the Ministry of Finance, state administration of taxation issued concerning the preferential VAT printing resources comprehensive utilization of products and services directory notice (caishui [2015] no. 79), the company's subsidiary, chinalco's environmental protection and energy saving group co., LTD., its electrolyte products are preferential tax project, sales produced electrolyte of pay VAT is to enjoy the tax refund; The company's subsidiary chinalco's environmental protection and energy saving group co., LTD., affiliated Beijing technology co., LTD. Baotou branch of aluminum can clean environment, lanzhou branch, linyi branch, east ningxia branch and evaluation branch industrial waste gas treatment services, coal-fired power plants and various industrial enterprise production process of flue gas, VAT is high sulfur gas processing services to enjoy preferential.

(8) The company's subsidiary in China aluminum group high-end manufacturing co., LTD., chongqing units they belong to west aluminum precision die casting co., LTD acquire the qualification of welfare enterprises, according to the Ministry of Finance, state administration of taxation on promoting employment for the disabled value-added tax preferential policy notice (caishui [2016] no. 52) and other documents of the act, the VAT is to enjoy the preferential back; The income tax of the disabled can be deducted from 100% of their total wages.

### 7. Other tax preferences

(1) The Resource Tax of Yuxi Mining Co., Ltd., affiliated to China Copper Co., Ltd. which is a subsidiary of the Company, meets the conditions on mine in exhaustion period pursuant to "Notice of the Ministry of Finance and the State Administration of Taxation on the Specific Policy Issues of Resource Tax Reform Caishui (2016) No. 54". The resource tax for Lion Rock enjoys a 30% exemption for exhausted mines.

## Note 7 Business Combination and Consolidated Financial Statements

### 7.1 Basic information of major subsidiaries included in the consolidated financial statements this year

No	Enterprise name	Level	Type	Registered address	Principal place of business	Business nature	Paid-in capital (ten thousand)	Proportion of shares (%)	Proportion of voting rights (%)	Investment amount (Ten thousand)	Acquisition method
1	Aluminum Corporation of China	level 2	1	Beijing	Beijing	Aluminum Smelting	1,702,267.30	31.88	31.88	811,850.17	1
2	China Aluminum International Engineering Corporation Limited.	level 2	1	Beijing	Beijing	Engineering survey and design	295,906.67	76.50	76.50	34,696.15	1
3	Chinalco Asset Management Co., Ltd.	level 2	1	Beijing	Beijing	Other unspecified service industries	134,145.75	100.00	100.00	321,881.28	1
4	Baotou Aluminum (Group) Co., Ltd.	level 2	1	Baotou City, Inner Mongolia	Baotou City, Inner Mongolia	Aluminum Smelting	42,688.41	80.00	80.00	92,406.98	1

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No	Enterprise name	Level	Type	Registered address	Principal place of business	Business nature	Paid-in capital (ten thousand)	Proportion of shares (%)	Proportion of voting rights (%)	Investment amount (Ten thousand)	Acquisition method
5	Aluminum Corporation of China Overseas Holdings Limited	level 2	3	Hong Kong Special Administrative Region	Hong Kong Special Administrative Region	Other commonly used nonferrous metal mining	182,418.30	100.00	100.00	182,431.27	1
6	Chinalco Rare Earth Corporation Limited	level 2	1	Beijing	Beijing	Wholesale of metals and metal mines	152,675.09	71.12	71.12	21,648.01	1
7	Chinalco Henan Aluminum Co., Ltd.	level 2	1	Luoyang City, Henan Province	Luoyang City, Henan Province	Aluminum rolling	113,246.00	86.84	86.84	1,393.78	1
8	Chinalco Metals Trading Company Limited	level 2	1	Beijing	Beijing	Other unspecified wholesale businesses	10,000.00	100.00	100.00	10,000.00	1
9	China Copper Co., Ltd.	level 2	1	Kunming, Yunnan Province	Kunming, Yunnan Province	Copper rolling	4,282,715.52	69.32	69.32	3,001,130.40	1
10	Chinalco Capital Holdings Limited	level 2	2	Beijing	Beijing	Financial leasing, insurance brokerage and agency services	412,536.32	89.98	89.98	365,056.91	1
11	Chinalco Finance Company Limited	level 2	2	Beijing	Beijing	Finance Company	400,000.00	100.00	100.00	340,955.00	1
12	Chinalco Shenyang Nonferrous Metal Processing Co., Ltd.	level 2	1	Shenyang City, Liaoning Province	Shenyang City, Liaoning Province	Rare rare earth metal rolling processing	81,235.00	80.30	80.30	73,479.77	1
13	Chinalco Materials Application Research Institute Co., Ltd	level 2	1	Beijing	Beijing	Research and experimental development	21,329.41	100.00	100.00	21,329.41	1

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No	Enterprise name	Level	Type	Registered address	Principal place of business	Business nature	Paid-in capital (ten thousand)	Proportion of shares (%)	Proportion of voting rights (%)	Investment amount (Ten thousand)	Acquisition method
14	Chinalco Environmental Protection and Energy Conservation Group Co., Ltd	level 2	1	Beijing	Beijing	Research and experimental development	518.73	100.00	100.00	5,740.71	3
15	Chinalco Tendering Co., Ltd	level 2	1	Beijing	Beijing	Professional technical service industry	2,000.00	55.00	55.00	1,100.00	1
16	Beijing Silver Aluminum Rongfa Fund Partnership (Limited Partnership)	level 2	1	Beijing	Beijing	Fund investment	983,000.00	20.00	20.00	196,600.00	1
17	Chinalco Environmental Protection and Energy Conservation Group Co., Ltd	level 2	1	Baoding, Hebei	Baoding, Hebei	Solid waste treatment	72,537.00	100.00	100.00	72,537.00	1
18	Chinalco Innovation Development Investment Co., Ltd	level 2	1	Shenzhen	Shenzhen	Investment and asset management	85,091.11	71.91	71.91	50,000.00	1
19	Chinalco Overseas Development Co., Ltd	level 2	1	Guangzhou City	Guangzhou City	Other commonly used nonferrous metal mining	15,000.00	54.52	54.52	5,000.00	1
20	Chinalco Science and Technology Research Institute Co., Ltd	level 2	1	Beijing	Beijing	Engineering and technology research and experimental development	83,355.26	100.00	100.00	211,737.22	3

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No	Enterprise name	Level	Type	Registered address	Principal place of business	Business nature	Paid-in capital (ten thousand)	Proportion of shares (%)	Proportion of voting rights (%)	Investment amount (Ten thousand)	Acquisition method
21	Chinalco Intelligent Technology Development Corporation Limited	level 2	1	Hangzhou City	Hangzhou City	Information Intelligent Service	50,000.00	100.00	100.00	50,000.00	1
22	Pingguo Aluminum Co., Ltd.	level 2	1	Pingguo City, Guangxi	Pingguo City, Guangxi	Electricity, heat, gas and water production and supply	35,000.00	100.00	100.00	49,783.07	1
23	Chinalco High-end Manufacturing Co., Ltd.	level 2	1	Chongqing	Chongqing	Chemical raw materials and chemical products manufacturing	1,500,000.00	65.00	65.00	975,000.00	4

Note 1: Types of enterprises: 1. Domestic non-financial subsidiary, 2. Domestic financial subsidiary, 3. Overseas subsidiary, 4. Public institution, 5. Infrastructure unit

Note 2: Acquisition method: 1. Investment establishment, 2. Business combination under the same control 3. Business combination not under the same control 4. Others

7.2 Reasons that the parent has control of the investee when it owns less than half of the voting rights over the investee

No.	Enterprise name	Proportion of shares (%)	Proportion of voting rights (%)	Registered capital (ten thousand)	Investment (ten thousand)	Level	Reason for consolidation
1	Aluminum Corporation of China Limited	31.88	31.88	1,702,267.30	811,839.57	Level 2	Note 1
2	Beijing Silver Aluminum Rongfa Fund Partnership (Limited Partnership)	20.00	20.00	983,000.00	196,600.00	Level 2	Note 2
3	Yunnan Copper Co., Ltd.	37.51	37.51	169,967.86	63,754.94	Level 4	Note 1

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No.	Enterprise name	Proportion of shares (%)	Proportion of voting rights (%)	Registered capital (ten thousand)	Investment (ten thousand)	Level	Reason for consolidation
4	Yunnan Chihong Zinc and Germanium Company Limited	38.19	38.19	509,129.16	194,414.28	level 4	Note 1
5	Yunnan Aluminium Co., Ltd.	42.10	42.10	346,795.74	146,010.89	level 4	Note 1
6	Ningxia Yinxing Energy Co., Ltd	40.23	40.23	70,611.90	128,613.20	level 4	Note 1
7	Guizhou Huaren New Material Co., Ltd.	40.00	40.00	120,000.00	46,165.27	Level 3	Note 3
8	Shanxi Chalco China Resources Co., Ltd.	40.00	40.00	164,175.00	65,670.00	Level 3	Note 4
9	Lao Cement Public Company	35.49	35.49	1,695.15	601.59	Level 5	Note 5
10	Chifeng Yun Copper non-ferrous Metal Co. Ltd.	45.00	45.00	94,200.76	42,388.71	Level 5	Note 6

Note 1: The Company's subsidiaries, Aluminum Corporation of China Limited, Yunnan Copper Co., Ltd., Yunnan Chihong Zinc and Germanium Co., Ltd., and Ningxia Yinxing Energy Co., Ltd. are all listed companies. The Group's comprehensive shareholding is the largest shareholder, and the shareholding held by other shareholders is relatively dispersed, which is not sufficient to affect the Group's controlling shareholder status. Based on the above factors, the Group has control over its operations and financial decisions.

Note 2: According to the partnership agreement, the investment decision-making committee is the highest investment decision-making body of Beijing Yin Aluminum Rongfa Fund Partnership (Limited Partnership) (hereinafter referred to as "Yin Aluminum Rongfa"). The investment decision-making committee is composed of 5 members, the Company has the right to nominate 3 members which accounts for 60% of total committee members. According to the rules of procedure of the investment decision-making committee, the partnership's proposal of debt investments and other legal forms of investments, as well as other related investments shall be approved by more than half of the members. In addition, with the unanimous consent of all partners, the funds of the partnership are mainly used to issue entrusted loans or other forms of investments to the Company and its affiliated companies. Based on the above factors, the Company is able to control related activities through the investment decision-making committee, so as to enjoy variable returns and impose a significant impact on the amount of returns, thereby achieve control over Yin Aluminum Rongfa.

Note 3: Aluminum Corporation of China Limited, a subsidiary of the company, holds 40% equity of Guizhou Huaren New Materials Co., Ltd. According to the "Concerted Action Agreement" signed between Aluminum Corporation of China Limited and Hangzhou Jinjiang Group Co., Ltd. When the board of directors and shareholders of Guizhou Huaren New Materials Co., Ltd. are voting, Qingzhen Industrial Investment Co., LTD and Guizhou Chengqian Enterprise (Group) Co., LTD. and China Aluminum Co., Ltd. will act in concert. Therefore, the board of directors of Aluminum Corporation of China Limited believes that Aluminum Corporation of China Limited is able to exercise control over Guizhou Huaren New Materials Co., Ltd.



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Note 4: Aluminum Corporation of China Limited, a subsidiary of the Group, holds 40% of the shares of Shanxi Chalco China Resources Co., Ltd. According to the "Concerted Action Agreement" signed between Aluminum Corporation of China Limited and China Resources Coal Group Co., Ltd. When the board of directors and shareholders of Aluminum Corporation of China Limited are voting, China Resources Coal and Aluminum Corporation of China Limited will act in concert. Therefore, the board of directors of Aluminum Corporation of China Limited believes that Aluminum Corporation of China Limited is able to exercise control over Shanxi Chalco China Resources Co., Ltd..

Note 5: The Group's comprehensive shareholding is its largest shareholder. The shareholdings held by other shareholders are dispersive, which is not sufficient to affect the status of shareholders of the Group. In addition, the key management personnel designated by the Group have substantive impact on its operational and financial decisions based on the above factors, the Group has control over its operational and financial decisions.

Note 6: The company subsidiary of Yunnan Copper Co., Ltd. owns chifeng cloud Copper non-ferrous metal Co., Ltd. (hereinafter referred to as the "chifeng cloud Copper") 45% stake, according to the Yunnan Copper Co., Ltd. and chifeng chifeng caxa to shareholders of cloud Copper Copper Co., Ltd. Signed the agreement of the concerted action person ", chifeng caxa Copper industry Co., Ltd. As shareholders of the Copper 10% stake in chifeng cloud, The voting on all major issues in the production and operation of Chifeng Copper Is consistent with Yunnan Copper Co.,Ltd. Therefore, Yunnan Copper Co.,Ltd. has acquired 55% of the voting rights of Chifeng Copper and can exercise control over It.

7.3 Reasons that the parent has no control of the investee when it directly owns or indirectly owns through other subsidiaries more than half of the voting rights over the investee

No.	Enterprise name	Proportion of shares (%)	Proportion of voting rights (%)	Registered capital	Investment	Level	Reason for not being consolidated
1	Yunnan Copper (Group) Co., Ltd.	60.00	60.00	6,800.00	4,080.00	Level 4	Note 1
2	China (Yuntong) Thailand Investment and Development Co., Ltd.	90.00	90.00	2,652.45	2,387.20	Level 4	Note 2

Note 1: Chinalco Guangxi Nonferrous Rare Earth Development Co., Ltd., a subsidiary of the Group, has 60% voting rights in the shareholders meeting of Guangxi Guoxing Rare Earth Mining Co., Ltd., and 3/5 seats in the board of directors. The Company's articles of association stipulate: shareholders meeting Shareholders exercise their voting rights in proportion to their capital contributions. Resolutions made at the meeting must be passed by more than three-quarters of the voting rights held by shareholders present at the meeting; resolutions made by the board of directors are subject to the one-person, one-vote system, and resolutions of the board of directors must be passed by more than two-thirds of all directors (including 2/3) voted through. Neither the voting rights of the shareholders meeting nor the seats on the board of directors can reach the proportion of controlling the Company.

Note 2: The Company is an overseas subsidiary established by Yunnan Copper (Group) Co., Ltd., a subsidiary of the Group, which has limited control and no substantial control over it.

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## 7.4 Significant partially-owned subsidiaries

## 1. Minority shareholders

No.	Enterprise name	Proportion of minority interests (%)	Profit or loss attributable to minority interests	Dividends paid to minority interests	Cumulative non-controlling interests at year end
1	Aluminum Corporation of China Limited	68.12	3,460,203,063.86		39,008,704,681.85
2	China Copper Co., Ltd.	27.08	682,623,649.61		8,935,851,194.23
3	China Aluminum International Engineering Corporation Limited.	23.50	-223,280,473.19	22,007,656.35	1,041,931,904.23
4	Chinalco Rare Earth Corporation Limited	52.82	205,255,139.97		598,400,282.82
5	Chinalco High-end Manufacturing Co., Ltd.	35.00	82,403,728.71		4,033,954,157.77

## 2. Major financial information

Items	Current Year				
	Aluminum Corporation of China Limited	China Copper Co., Ltd.	China Aluminum International Engineering Co., Ltd.	China Rare Earth Co., Ltd	Chinalco High-end Manufacturing Co., Ltd.
Current assets	48,714,042,568.77	49,136,948,200.28	37,377,203,055.44	3,810,112,960.07	13,276,502,395.33
Non-current assets	143,662,854,260.05	155,438,655,026.49	21,450,832,260.81	2,516,620,221.02	17,094,455,392.65

**ALUMINUM CORPORATION OF CHINA (Consolidated) Notes to the financial statements for the year of 2021**

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(Unless otherwise specified, the notes to the financial statements are all presented in RMB)

Items	Current Year				
	Aluminum Corporation of China Limited	China Copper Co., Ltd.	China Aluminum International Engineering Co., Ltd.	China Rare Earth Co., Ltd	Chinalco High-end Manufacturing Co., Ltd.
Total assets	192,376,896,828.82	204,575,603,226.77	58,828,035,316.25	6,326,733,181.09	30,370,957,787.98
Current liability	52,180,792,223.47	66,465,152,754.42	29,641,646,708.81	1,710,591,028.56	10,903,936,249.70
Non-current liability	67,412,607,926.49	68,920,791,824.99	12,671,206,588.34	284,771,584.37	6,862,714,822.86
Total liability	119,593,400,149.96	135,385,944,579.41	42,312,853,297.15	1,995,362,612.93	17,766,651,072.56
Operating revenue	269,748,231,829.15	211,840,047,561.37	23,348,196,308.09	6,990,968,925.66	32,392,960,505.19
Net profit	7,789,019,323.36	5,730,877,824.12	-861,602,880.09	500,274,304.82	195,234,689.08
Total comprehensive income	8,012,037,008.33	6,704,245,311.67	-887,880,564.40	528,489,368.36	191,134,103.74
Cash flows from operating activities	28,306,355,569.82	24,993,148,497.95	734,215,040.09	250,642,405.87	2,075,368,401.11

(Continued)

**ALUMINUM CORPORATION OF CHINA (Consolidated) Notes to the financial statements for the year of 2021**

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Items	Prior Year				
	Aluminum Corporation of China Limited	China Copper Co., Ltd.	China Aluminum International Engineering Co., Ltd.	China rare earth Co., Ltd	Chinalco High-end Manufacturing Co., Ltd.
Current assets	46,268,649,541.92	41,820,575,615.77	38,571,222,971.56	2,855,772,290.85	13,048,013,099.26
Non-current assets	148,772,264,299.90	163,148,553,738.32	15,917,622,903.94	2,104,138,370.28	17,441,028,410.86
Total assets	195,040,913,841.82	204,969,129,354.09	54,488,845,875.50	4,959,910,661.13	30,489,041,510.12
Current liability	62,633,005,781.36	90,509,607,221.28	29,929,473,277.53	1,252,422,950.76	11,651,516,094.13
Non-current liability	61,102,742,259.82	53,057,822,660.54	8,922,459,914.71	151,562,691.06	6,447,652,092.19
Total liability	123,735,748,041.18	143,567,429,881.82	38,851,933,192.24	1,403,985,641.82	18,099,168,186.32
Operating revenue	185,990,577,810.91	152,824,576,456.42	23,025,950,957.87	4,110,915,700.29	21,815,966,221.70
Net profit	1,599,250,262.05	1,385,348,733.33	-1,856,397,497.80	102,031,901.26	-506,930,570.71

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Items	Prior Year				
	Aluminum Corporation of China Limited	China Copper Co., Ltd.	China Aluminum International Engineering Co., Ltd.	China rare earth Co., Ltd	Chinalco High-end Manufacturing Co., Ltd.
Total comprehensive income	1,718,882,121.94	-676,712,175.33	-1,929,752,668.81	101,025,326.26	-531,030,213.04
Cash flows from operating activities	14,955,026,623.30	15,884,205,423.35	610,735,587.45	120,561,906.00	1,129,764,829.01

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7.5 Subjects newly included in the scope of consolidation and subjects no longer included in the scope of consolidation in this year

1. Entities that are Newly Consolidated in Current Year

Enterprise name	Registered place	Registered capital (ten thousand)	Nature of business	Net assets at the end of the year	Net profit at the end of the year
Zhongxi (Shandong) Rare Earth Development Co. LTD	Jining, Shandong Province	35,806.58	New material technology promotion service	545,247,968.02	21,052,880.44
Steel Research Group Rare earth Technology Co. LTD	Shouguang city, Shandong Province	17,000.00	Rare earth metal smelting	149,142,263.47	14,508,494.21
Weishan Steel Research Rare earth Materials Co., LTD	Jining, Shandong Province	13,142.67	Smelting of other rare metals	142,435,334.51	918,071.76
Shandong Weishan Lake Rare Earth Co. LTD	Jining, Shandong Province	12,228.96	Rare earth metal mining and beneficiation	216,731,155.61	4,818,584.41
Chalco Intelligent Copper Creation Technology (Yunnan) Co., LTD	Kunming, Yunnan Province	1,000.00	Operation and Maintenance service	10,727,287.41	727,287.41
Chongqing Guocuang Light alloy Research Institute Co. LTD	Chongqing	16,150.00	Aluminium calendaring processing	161,541,809.65	41,809.65
Shanghai Orient Futures Brokerage Co. LTD	Shanghai	4,500.00	Other futures market services	21,363,573.66	-8,037,852.99

2. Former entities that are not consolidated in current year

(1) Former subsidiaries that are not consolidated in current year

Enterprise name	Registered address	Registered capital (ten thousand)	Business nature	Proportion of shares (%)	Proportion of voting rights (%)	Reason for not being a subsidiary in current year
Chinalco Guangzhou Nonferrous Metal	Guangzhou, Guangdong	1,185.30	Engineering and technical research	100.00	100.00	The liquidation



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Application Research Institute Co. LTD	Province		and test development			
Inner Mongolia Fengrong Distribution Power Co., LTD	Baotou, Inner Mongolia	3,200.00	The power supply	75.00	75.00	Foreign disposal
Yunnan Metallurgy Group Junan Insurance Broker Co. LTD	Kunming, Yunnan Province	1,000.00	Insurance Brokerage Services	51.00	51.00	Foreign disposal
Yunnan Metallurgy Equity Investment Fund Management Co. LTD	Kunming, Yunnan Province	300.00	Capital investment Services	100.00	100.00	The cancellation
Yunnan Metallurgical Yunxin Silicon Material Co., LTD	Qujing Sutra in Yunnan Province	170,000.00	Nonferrous metal alloy manufacturing	70.44	70.44	Foreign disposal
Hami Xinqing Mining Co. LTD	Hami Prefecture, Xinjiang	1,000.00	Solid mineral geological exploration	100.00	100.00	The cancellation
Yunnan Sanyi Non-ferrous Metal Storage and Transportation Co. LTD	Kunming, Yunnan province	2,800.00	Other railway transport auxiliary activities	51.00	51.00	Foreign disposal
Kunming Heavy Industry Anti-corrosion insulation Engineering Co., LTD	Kunming, Yunnan Province	200.00	Installation of piping and equipment	51.00	51.00	Foreign disposal
Qinghai Zerong Mining Development Co. LTD	Xining, Qinghai Province	6,300.00	Lead and zinc mining	100.00	100.00	Foreign disposal
Yunnan Jinsha Mining Co. LTD	Kunming, Yunnan Province	8,059.00	Copper acquisition	51.00	51.00	Foreign disposal
Kunming Heavy Industry Jiasheng Huijie Special Equipment Manufacturing Co. LTD	Kunming, Yunnan Province	1,000.00	Environmental protection special equipment manufacturing	80.00	80.00	Foreign disposal
Yunnan Securities Exchange Center	Kunming, Yunnan Province	2,000.00	Other professional consulting and investigation	100.00	100.00	The cancellation
Yunnan Copper Enterprise Incubation Park Co., LTD	Kunming High-tech Zone	4,010.00	Other professional technical services not listed	70.08	70.08	The cancellation
Yunnan Metallurgy Hui Jing Photovoltaic Technology Co., LTD	Kunming economy opened	400.00	Solar power generation	100.00	100.00	Foreign disposal
Huize Andes Mining Co. LTD	Qujing City, Yunnan Province	25,600.00	Geological exploration technical services	100.00	100.00	The cancellation

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Zhongxi (Yixing) Rare earth New Materials Co. LTD	Yixing City, Jiangsu Province	5,800.00	Rare earth metal smelting	100.00	100.00	Foreign disposal
Chalco Xinjiang Aluminum power Co. LTD	Turpan city, Xinjiang Province	7,692.31	Aluminium smelting	65.00	65.00	Foreign disposal
Xin Cheng Tong (Tianjin) Construction Engineering Co., LTD	Tianjin	10.00	Other Housing construction	100.00	100.00	The cancellation
Shanxi Longye Construction Labor Service Co. LTD	Taiyuan, Shanxi Province	200.00	Installation of other buildings	100.00	100.00	The cancellation
Guizhou Aluminum Xing Property Management Co. LTD	Guiyang, Guizhou Province	300.00	Other Residential services	100.00	100.00	The cancellation
Shandong Shanai Electromechanical Technology Co., LTD	Zibo, Shandong Province	120.00	Other general equipment manufacturing industries are not listed	100.00	100.00	The cancellation
Shanxi Jinaluminum Mine Engineering Service Co., LTD	Luliang Xiao, Shanxi Province		Other professional technical services not listed			The cancellation
Zhengzhou Pufa Construction Labor Co., LTD	Zhongyuan District, Zhengzhou city	100.00	Installation of other buildings	100.00	100.00	The cancellation
Chongqing Xialuminum Huachuan Construction Engineering Co., LTD	Jiulongpo, Chongqing	903.73	Other Housing construction	100.00	100.00	The cancellation

(2) Financial position of the former subsidiaries at the date of disposal and the reporting date of prior year

Subsidiary name	Date of disposal	Date of disposal		
		Total assets	Total liabilities	Total owners' equity
Chinalco Guangzhou Nonferrous Metal Application Research Institute Co. LTD	December 2021	78,265.72		78,265.72
Inner Mongolia Fengrong Distribution Power Co., LTD	December 2021	31,145,235.05	168,669.34	30,976,565.71
Yunnan Metallurgy Group Junan Insurance Broker Co. LTD	March 2021	17,709,290.68	1,165,920.25	16,543,370.43
Yunnan Metallurgy Equity Investment Fund Management Co. LTD	November 2021	2,509,516.05	1,726.39	2,507,789.66
Yunnan Metallurgical Yunxin Silicon Material Co., LTD	December 2021	56,115,430.88	5,271,902,337.06	-5,215,786,906.18
Hami Xinqing Mining Co. LTD	December	122,059.01		122,059.01

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Subsidiary name	Date of disposal	Date of disposal		
		Total assets	Total liabilities	Total owners' equity
	2021			
Yunnan Sanyi Non-ferrous Metal Storage and Transportation Co. LTD	December 2021	31,743,536.15	461,531.69	31,282,004.46
Kunming Heavy Industry Anti-corrosion insulation Engineering Co., LTD	April 2021	12,236,963.84	9,746,979.99	2,489,983.85
Qinghai Zerong Mining Development Co. LTD	June 2021	98,186,665.08	154,666,297.28	-56,479,632.20
Yunnan Jinsha Mining Co. LTD	September 2021	871,363,477.29	710,099,087.47	161,264,389.82
Kunming Heavy Industry Jiasheng Huijie Special Equipment Manufacturing Co. LTD	November 2021	7,120,743.54	19,872,367.00	-12,751,623.46
Yunnan Securities Exchange Center	November 2021	1,000,000.00	25,682,944.34	-24,682,944.34
Yunnan Copper Enterprise Incubation Park Co., LTD	December 2021	25,915,824.05	2,770,131.04	23,145,693.01
Yunnan Metallurgy Hui Jing Photovoltaic Technology Co., LTD	December 2021	1,842,018.82	964,412.03	877,606.79
Huize Andes Mining Co. LTD	December 2021	299,492,960.39		299,492,960.39
Zhongxi (Yixing) Rare earth New Materials Co. LTD	September 2021	213,872,737.15	174,583,390.17	39,289,346.98
Chalco Xinjiang Aluminum power Co. LTD	June 2021	38,612,727.66	27,510,838.49	11,101,889.17
Xin Cheng Tong (Tianjin) Construction Engineering Co., LTD	December 2021	13,672,116.52	2,518,464.41	11,153,652.11
Shanxi Longye Construction Labor Service Co. LTD	December 2021			
Guizhou Aluminum Xing Property Management Co. LTD	November 2021	6,424,144.16	3,498,392.02	2,925,752.14
Shandong Shanal Electromechanical Technology Co., LTD	November 2021	18,970,004.62	4,390,413.87	14,579,590.75
Shanxi Jinaluminum Mine Engineering Service Co., LTD	December 2021	2,484,946.28	1,757,791.57	727,154.71
Zhengzhou Pufa Construction Labor Co., LTD	December 2021			
Chongqing Xialuminum Huachuan Construction	July 2021			

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Subsidiary name	Date of disposal	Date of disposal		
		Total assets	Total liabilities	Total owners' equity
Engineering Co., LTD				

(Continued)

Subsidiary name	Date of disposal	31 December 2020		
		Total assets	Total liabilities	Total owners' equity
Chinalco Guangzhou Nonferrous Metal Application Research Institute Co. LTD	December 2021	922,469.34	116,768.67	805,700.67
Inner Mongolia Fengrong Distribution Power Co., LTD	December 2021	33,354,959.24	1,023,820.00	32,331,139.24
Yunnan Metallurgy Group Junan Insurance Broker Co. LTD	March 2021	17,913,156.74	1,195,078.84	16,718,077.90
Yunnan Metallurgy Equity Investment Fund Management Co. LTD	November 2021	2,494,181.06	1,726.39	2,492,454.67
Yunnan Metallurgical Yunxin Silicon Material Co., LTD	December 2021	70,557,796.84	5,043,847,519.33	-4,973,289,722.49
Hami Xinqing Mining Co. LTD	December 2021	24,560.39	256,847.00	-232,286.61
Yunnan Sanyi Non-ferrous Metal Storage and Transportation Co. LTD	December 2021	31,086,181.32	378,785.74	30,707,395.58
Kunming Heavy Industry Anti-corrosion insulation Engineering Co., LTD	April 2021	11,717,419.89	9,227,836.13	2,489,583.76
Qinghai Zerong Mining Development Co. LTD	June 2021	98,186,665.08	154,666,297.28	-56,479,632.20
Yunnan Jinsha Mining Co. LTD	September 2021	980,377,721.73	787,937,049.38	192,440,672.35
Kunming Heavy Industry Jiasheng Huijie Special Equipment Manufacturing Co. LTD	November 2021	8,104,449.93	25,863,497.00	-17,759,047.07
Yunnan Securities Exchange Center	November 2021	1,000,000.00	25,682,944.34	-24,682,944.34
Yunnan Copper Enterprise Incubation Park Co., LTD	December 2021	46,118,803.53	3,754,596.71	42,364,206.82
Yunnan Metallurgy Hui Jing Photovoltaic Technology Co., LTD	December 2021	2,242,018.82	1,364,412.03	877,606.79
Huize Andes Mining Co. LTD	December 2021	264,057,487.37	7,037,635.57	257,019,851.80
Zhongxi (Yixing) Rare earth New Materials Co. LTD	September 2021	46,128,404.27	11,633,281.77	34,495,122.50
Chalco Xinjiang Aluminum power Co. LTD	June 2021	38,614,136.29	27,512,247.12	11,101,889.17
Xin Cheng Tong (Tianjin) Construction Engineering Co., LTD	December 2021	15,712,310.19	4,558,658.08	11,153,652.11

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Subsidiary name	Date of disposal	31 December 2020		
		Total assets	Total liabilities	Total owners' equity
Shanxi Longye Construction Labor Service Co. LTD	December 2021			
Guizhou Aluminum Xing Property Management Co. LTD	November 2021	7,885,013.41	4,998,234.20	2,886,779.21
Shandong Shanal Electromechanical Technology Co., LTD	November 2021	18,304,973.63	4,988,905.25	13,316,068.38
Shanxi Jinaluminum Mine Engineering Service Co., LTD	December 2021	5,858,019.57	5,305,690.93	552,328.64
Zhengzhou Pufa Construction Labor Co., LTD	December 2021	18,948,693.92	16,274,358.38	2,674,335.54
Chongqing Xialuminum Huachuan Construction Engineering Co., LTD	July 2021	11,360,458.91	3,630,484.29	7,729,974.62

(3) Financial performance of the former subsidiaries from beginning of current year to date of disposal

Subsidiary name	Date of disposal	From beginning of current year to date of disposal		
		Total Operating Revenue	Total Operating Costs	Net profit
Chinalco Guangzhou Nonferrous Metal Application Research Institute Co. LTD	December 2021		-8.94	8.94
Inner Mongolia Fengrong Distribution Power Co., LTD	December 2021		462,034.93	-368,935.82
Yunnan Metallurgy Group Junan Insurance Broker Co. LTD	March 2021	85,074.80	173,552.80	-88,478.00
Yunnan Metallurgy Equity Investment Fund Management Co. LTD	November 2021		3,230.95	-3,230.95
Yunnan Metallurgical Yunxin Silicon Material Co., LTD	December 2021	8,884.96	21,883,521.72	-21,874,636.76
Hami Xinqing Mining Co. LTD	December 2021	356,435.64	192.52	-300,654.38
Yunnan Sanyi Non-ferrous Metal Storage and Transportation Co. LTD	December 2021	364,603.16	314,874.49	49,728.67
Kunming Heavy Industry Anti-corrosion insulation Engineering Co., LTD	April 2021	360,000.00	359,926.33	89.39
Qinghai Zerong Mining Development Co. LTD	June 2021			
Yunnan Jinsha Mining Co. LTD	September 2021	4,442,431.99	6,349,565.16	-1,907,133.17
Kunming Heavy Industry Jiasheng Huijie Special Equipment Manufacturing Co. LTD	November 2021		31,909.01	-31,909.01

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Subsidiary name	Date of disposal	From beginning of current year to date of disposal		
		Total Operating Revenue	Total Operating Costs	Net profit
Yunnan Securities Exchange Center	November 2021			
Yunnan Copper Enterprise Incubation Park Co., LTD	December 2021	654,143.93	-1,430,526.95	1,868,403.43
Yunnan Metallurgy Hui Jing Photovoltaic Technology Co., LTD	December 2021			
Huize Andes Mining Co. LTD	December 2021	306,332,808.85	249,710,692.56	42,466,604.99
Zhongxi (Yixing) Rare earth New Materials Co. LTD	September 2021	88,026,761.34	87,893,970.95	-169,409.98
Chalco Xinjiang Aluminum power Co. LTD	June 2021			
Xin Cheng Tong (Tianjin) Construction Engineering Co., LTD	December 2021			
Shanxi Longye Construction Labor Service Co. LTD	December 2021			
Guizhou Aluminum Xing Property Management Co. LTD	November 2021	1,003,418.56	997,035.71	7,172.77
Shandong Shanal Electromechanical Technology Co., LTD	November 2021	2,309,078.35	2,059,386.48	247,509.29
Shanxi Jinaluminum Mine Engineering Service Co., LTD	December 2021	416,835.00	400,869.17	158,124.74
Zhengzhou Pufa Construction Labor Co., LTD	December 2021	-2,790,016.14	-110,997.12	-2,292,114.94
Chongqing Xialuminum Huachuan Construction Engineering Co., LTD	July 2021			

**Note 8 Significant Items in Consolidated Financial Statements**

As for following items, unless otherwise stated, "opening balance" means balance on 1 January 2021, "closing balance" means 31 December 2021, "current year" means the year from 1 January to 31 December 2021, "prior year" means the year from 1 January to 31 December 2020. Unless otherwise specified, all amount take Renminbi yuan as the functional currency.

**8.1 Monetary funds**

**1) Monetary fund balance**

Items	Closing balance	Opening balance
Cash on hand	1,898,492.89	2,600,540.32
Cash at bank	69,228,520,500.22	44,949,281,874.20
Other cash equivalents	3,508,982,880.87	3,836,703,582.20
<b>Total</b>	<b>72,739,401,873.98</b>	<b>48,788,585,996.72</b>



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Items	Closing balance	Opening balance
Including: Total amount deposited overseas	4,696,169,409.91	3,662,082,709.98

**2) The restricted monetary fund details are as follows:**

Items	Closing balance	Opening balance
Bank acceptance draft deposits	1,198,262,128.49	1,646,659,289.42
Letter of credit guarantee deposits	115,914,638.03	400,593,180.33
Performance bond	28,511,848.40	24,065,676.42
Term deposit or notice deposit for guarantee	8,757,472.61	19,552,755.63
Deposits in central bank	1,628,269,034.93	1,694,670,374.35
Mine deposit	369,533,135.51	293,087,352.19
Land reclamation deposit	300,717,828.09	250,676,441.64
Environmental governance recovery deposit	63,637,529.20	189,864,616.51
Guarantee deposit	246,755,903.80	89,351,050.58
Others	820,430,736.50	594,017,213.49
<b>Total</b>	<b>4,780,790,255.56</b>	<b>5,202,537,950.56</b>

**8.2 Financial assets held for trading**

Items	Fair value at year end	Fair value at year beginning
Financial assets classified as at fair value through profit or loss	1,444,199,191.97	909,712,703.63
Including: Debt instrument investments		
Equity instrument investments <sup>Note</sup>	1,444,199,191.97	891,292,630.84
Others		18,420,072.79
Financial assets designated as at fair value through profit or loss		244,397,800.62
Including: Debt instrument investments		
Others		244,397,800.62
<b>Total</b>	<b>1,444,199,191.97</b>	<b>1,154,110,504.25</b>

Note: TAs of December 31, 2021, the equity instrument investment classified as financial assets measured at fair value and whose changes are recorded into current profit and loss is mainly the stock products invested by Yunnan Copper (Group) Co.,Ltd., Yunnan Copper Co.,Ltd. and China Copper Investment Co.,Ltd., which are subsidiaries of the Company. The company's subsidiary Chinalco Finance Co., Ltd. invested 600 million yuan in fund products and

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the company's subsidiary Chinalco Capital Holdings Co., Ltd. invested 94 million yuan in fund products.

**8.3 Derivative financial assets**

Items	Closing balance	Opening balance
Commodity Futures Contract	410,450.00	20,997,596.76
<b>Total</b>	<b>410,450.00</b>	<b>20,997,596.76</b>

**8.4 Notes receivable**

1. Classification of notes receivable

Category	Closing balance			Opening balance		
	Gross carrying amount	Bad debt provision	Carrying amount	Gross carrying amount	Bad debt provision	Carrying amount
Bank acceptance draft	1,143,768,214.97		1,143,768,214.97	277,439,373.39		277,439,373.39
Commercial acceptance draft				1,000,000.00		1,000,000.00
<b>Total</b>	<b>1,143,768,214.97</b>		<b>1,143,768,214.97</b>	<b>278,439,373.39</b>		<b>278,439,373.39</b>

2. Allowance for doubtful accounts receivable

Category	Closing balance				
	Gross carrying amount		Bad debt provision		Carrying amount
	Amount	Proportion (%)	Amount	Expected credit loss rate(%)	
Provision for bad debts shall be made on an individual basis	356,673,576.98	31.18			356,673,576.98
Provision for bad debts on a combinatorial basis	787,094,637.99	68.82			787,094,637.99
<b>Total</b>	<b>1,143,768,214.97</b>	<b>100.00</b>			<b>1,143,768,214.97</b>

(Continued)

Category	Opening balance				
	Gross carrying amount		Bad debt provision		Carrying amount
	Amount	Proportion (%)	Amount	Expected credit loss rate(%)	

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Category	Opening balance			
Provision for bad debts shall be made on an individual basis	226,072,596.00	81.19		226,072,596.00
Provision for bad debts on a combinatorial basis	52,366,777.39	18.81		52,366,777.39
<b>Total</b>	<b>278,439,373.39</b>	<b>100.00</b>		<b>278,439,373.39</b>

(1) Notes receivable of provision for bad debts on an individual basis

Name	Closing balance			
	Gross carrying amount	Bad debt provision	Expected credit loss rate(%)	Provision for
Bank acceptance draft	356,673,576.98			Expected to recover
<b>Total</b>	<b>356,673,576.98</b>			

(2) Notes receivable of provision for bad debts on a combinatorial basis

Name	Closing balance		
	Gross carrying amount	Bad debt provision	Expected credit loss rate(%)
Bank acceptance draft	787,094,637.99		
<b>Total</b>	<b>787,094,637.99</b>		

3. Notes receivable pledged at year-end

Classification	Amount pledged at the end of the year
Bank acceptance draft	118,896,436.95
Commercial acceptance draft	
<b>Total</b>	<b>118,896,436.95</b>

4. Notes receivable endorsed or discounted at the end of the year and not yet due on the balance sheet date

Classification	The confirmation amount shall be terminated at the end of the year	The amount not terminated at the end of the year
Bank acceptance draft	4,403,638,804.89	600,827,502.44
Commercial acceptance draft	23,958,461.20	
<b>Total</b>	<b>4,427,597,266.09</b>	<b>600,827,502.44</b>

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**8.5 Accounts receivable**

1. Classified disclosure of accounts receivable according to bad debt provision method

Category	Closing balance				The book value
	Gross carrying amount		Bad debt provision		
	Amount	Proportion (%)	Amount	Expected credit loss rate(%)	
Provision for doubtful accounts receivable on an individual basis	4,376,675,948.71	19.35	2,632,272,223.25	60.14	1,744,403,725.46
Accounts receivable for provision for bad debts according to combination of credit risk characteristics	18,239,103,790.68	80.65	2,189,969,236.74	12.01	16,049,134,553.94
Among them: aging combination	16,531,002,333.39	90.63	2,085,962,388.59	12.62	14,445,039,944.80
Aluminium, energy and trading portfolio	1,708,101,457.29	9.37	104,006,848.15	6.09	1,604,094,609.14
<b>Total</b>	<b>22,615,779,739.39</b>	<b>100.00</b>	<b>4,822,241,459.99</b>	<b>21.32</b>	<b>17,793,538,279.40</b>

(Continued)

Category	Opening balance				The book value
	Gross carrying amount		Bad debt provision		
	Amount	Proportion (%)	Amount	Expected credit loss rate(%)	
Provision for doubtful accounts receivable on an individual basis	6,406,875,990.74	26.66	2,378,382,115.19	37.12	4,028,493,875.55
Accounts receivable for provision for bad debts according to combination of credit risk characteristics	17,620,460,128.21	73.34	2,233,437,662.99	12.68	15,387,022,465.22
Among them: aging combination	16,334,237,408.56	92.70	2,032,914,678.29	12.45	14,301,322,730.27
Aluminium, energy and	1,286,222,719.65	7.30	200,522,984.70	15.59	1,085,699,734.95

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trading portfolio					
<b>Total</b>	<b>24,027,336,118.95</b>	<b>100.00</b>	<b>4,611,819,778.18</b>	<b>19.19</b>	<b>19,415,516,340.77</b>

2. Disclose accounts receivable by age

<b>Aging</b>	<b>Closing balance</b>	<b>Opening balance</b>
Within 1 year (including 1 year)	11,074,908,125.22	13,194,733,940.64
1-2 years	4,960,671,345.82	4,008,875,693.19
2-3 years	1,749,077,195.26	1,715,982,235.77
3-4 years	1,068,088,916.59	937,043,855.82
4-5 years	498,550,992.76	1,556,113,604.60
More than 5 years	3,264,483,163.74	2,614,586,788.93
<b>Total</b>	<b>22,615,779,739.39</b>	<b>24,027,336,118.95</b>
Less: provision for bad debts	4,822,241,459.99	4,611,819,778.18
<b>total</b>	<b>17,793,538,279.40</b>	<b>19,415,516,340.77</b>

3. Accounts receivable of the provision for doubtful accounts separately at the end of the year

<b>Debtor name</b>	<b>Gross carrying amount</b>	<b>Bad debt provision</b>	<b>Expected credit loss rate(%)</b>	<b>Reason for recognition</b>
Chinalco Zibo International Trade Co., Ltd	617,974,461.65	304.70		Expected to recover
Qinghai West Hydropower Co. Ltd	270,461,656.45	171,444,899.90	63.39	Risk of recovery
Zhuhai Hongfan nonferrous metal chemical Co. Ltd	270,419,301.02	270,419,301.02	100.00	Not expected to recover
Kunming Wanbao Jiyuan Biotechnology Co. Ltd	237,455,000.00	237,455,000.00	100.00	Not expected to recover
Xinjiang Jiarun Resources Holding Co. Ltd	228,800,176.98	222,546,414.33	97.27	Risk of recovery
Vietnam National Coal and Mineral Industries Holding Corporation Limited	216,793,487.46	130,076,092.48	60.00	Risk of recovery
Panjin hetai Real Estate Development Co. Ltd	212,855,167.01	78,641,751.75	36.95	Risk of recovery
Yunnan Huijia Import and export Co. Ltd	171,730,807.78	171,730,807.78	100.00	Not expected to recover
Baotou Donghe District Housing security and housing Administration	163,993,184.19	65,597,273.68	40.00	Risk of recovery

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<b>Debtor name</b>	<b>Gross carrying amount</b>	<b>Bad debt provision</b>	<b>Expected credit loss rate(%)</b>	<b>Reason for recognition</b>
Guizhou Jinping Aluminum Bar Co., Ltd	111,137,571.75	111,137,571.75	100.00	Not expected to recover
CRRC Logistics Co., Ltd	104,407,104.33			Expected to recover
SHANDONG HOMERUNTIRES CO.,Ltd	100,647,615.21	100,647,615.21	100.00	Not expected to recover
Inner Mongolia Jinlian Aluminum Material Co., Ltd	92,901,000.00	854,689.20	0.92	Risk of recovery
Yunnan Metallurgical Yunxin Silicon Material Co., Ltd	90,091,991.25	90,091,991.25	100.00	Not expected to recover
Shandong Jiata Plastic Packaging Co., Ltd	63,863,668.67	25,545,467.47	40.00	Risk of recovery
Vedanta Alumina Ltd.	60,693,117.88	60,693,117.88	100.00	Not expected to recover
Qinghai Baihe Aluminum Co. Ltd	47,159,128.46	19,860,709.37	42.11	Risk of recovery
Jiangmen Jiangcixi Electrician Enterprise Co., Ltd	46,299,715.63	46,299,715.63	100.00	Not expected to recover
Shanxi Longmen Aluminum Industry Co., Ltd	39,610,109.17	39,610,109.17	100.00	Not expected to recover
Henan Huashun Tiancheng Technology Co., Ltd	35,301,590.06	34,578,039.44	97.95	Risk of recovery
Shanxi Tongde Aluminium Industry Co. Ltd	34,316,330.86	34,316,330.86	100.00	Not expected to recover
Jianchuan Yiyun Non-ferrous Metal Co. Ltd	33,505,086.92	33,505,086.92	100.00	Not expected to recover
Panzhuhua Deming Nonferrous Metallurgy Co. Ltd	31,795,422.56	31,795,422.56	100.00	Not expected to recover
Yuncheng Yatai Logistics Park Co., Ltd	31,350,410.22	31,350,410.22	100.00	Not expected to recover
Dayao Six Tho electrolytic Copper Co. Ltd	28,551,974.88	28,551,974.88	100.00	Not expected to recover
Hanzhong Sejjia Construction development Co. Ltd	28,463,687.54	9,962,290.64	35.00	Risk of recovery
Xiaoyi Mining Co. Ltd	24,464,810.06	23,209,765.31	94.87	Risk of recovery

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<b>Debtor name</b>	<b>Gross carrying amount</b>	<b>Bad debt provision</b>	<b>Expected credit loss rate(%)</b>	<b>Reason for recognition</b>
Shougang Jingtang Iron & Steel Co. Ltd	24,378,464.00	24,378,464.00	100.00	Not expected to recover
Yunnan Mingchen Import and export Co. Ltd	22,685,419.88	22,685,419.88	100.00	Not expected to recover
Shandong Zihui Agricultural Science and Technology Co. Ltd	22,377,616.00	22,377,616.00	100.00	Not expected to recover
Changsha Jiangrong Real Estate Co. Ltd	21,737,814.08			Expected to recover
Dali County royal Sand Garden Tourism Development Co. Ltd	19,206,475.13	9,603,237.57	50.00	Risk of recovery
Changsha Evergrande World Tourism Development Co. Ltd	18,977,582.00	2,265,581.41	11.94	Risk of recovery
Citic Jiantou Securities Co. Ltd	18,900,000.00			Expected to recover
Guizhou Zhongding Environmental Protection Technology Co. Ltd	17,727,214.07	17,727,214.07	100.00	Not expected to recover
Zhengzhou Xinlilai Aluminum foil Co. Ltd	17,287,405.58	17,287,405.58	100.00	Not expected to recover
Shanghai Enyuan Industrial Co., Ltd	16,846,837.68	16,846,837.68	100.00	Not expected to recover
DELUXBEARINGSPRIVATELIMITED	14,427,635.29	14,427,635.29	100.00	Not expected to recover
Hemu Supply Chain Management (Shenzhen) Co., Ltd	14,312,774.64	14,312,774.64	100.00	Not expected to recover
Guangxi Chongzuo Hengsheng Real Estate Development Co. Ltd	13,971,208.35	2,091,568.72	14.97	Risk of recovery
Shandong Quanlin Straw Comprehensive Utilization Co. Ltd	13,481,782.88	13,481,782.88	100.00	Not expected to recover
Malaysian Aluminium Works	13,388,970.00	13,388,970.00	100.00	Not expected to recover
Dayao Osmanthus Copper Dressing and Metallurgy Co., Ltd	12,974,522.15	12,974,522.15	100.00	Not expected to recover
M&KINDUSTRIESCO.,LIMITED	12,404,093.50	12,404,093.50	100.00	Not expected to recover



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Debtor name	Gross carrying amount	Bad debt provision	Expected credit loss rate(%)	Reason for recognition
China Academy of Launch Vehicle Technology	12,058,679.41			Expected to recover
North Heavy Industry Group Co. Ltd	11,944,115.49	10,103,015.40	84.59	Risk of recovery
Shanxi aluminum plant carbon plant	11,119,127.78	11,119,127.78	100.00	Not expected to recover
Yunnan Qujing Shuangyou Iron and Steel Co. Ltd	10,897,670.21	7,628,369.15	70.00	Risk of recovery
Cnooc Guangxi Energy Co. Ltd	10,296,000.00	8,296,000.00	80.57	Risk of recovery
Others	630,230,962.60	308,950,434.15	49.02	Risk of recovery
<b>Total</b>	<b>4,376,675,948.71</b>	<b>2,632,272,223.25</b>		

4. Trade receivables that are collectively assessed for impairment as in a group of receivables of ahared credit risk characteristics

(1) Aging combination

Aging	Closing balance			Opening balance		
	Gross carrying amount		Bad debt provision	Gross carrying amount		Bad debt provision
	Amount	Proportion (%)		Amount	Proportion (%)	
Within 1 year (including 1 year)	8,743,681,111.68	52.89	67,996,352.45	10,344,836,326.55	63.33	74,250,954.28
1-2 years	4,410,081,282.03	26.68	463,512,209.26	2,621,256,252.90	16.05	318,386,353.35
2-3 years	1,318,201,691.13	7.97	263,948,275.23	1,332,277,599.30	8.16	284,105,473.33
3-4 years	843,515,415.95	5.10	255,383,964.81	474,017,471.36	2.90	159,038,097.69
4-5 years	361,885,283.28	2.20	181,824,070.99	713,721,830.55	4.37	356,845,885.81
Over 5 years	853,637,549.32	5.16	853,297,515.85	848,127,927.90	5.19	840,287,913.83
<b>Total</b>	<b>16,531,002,333.39</b>	<b>100.00</b>	<b>2,085,962,388.59</b>	<b>16,334,237,408.56</b>	<b>100.00</b>	<b>2,032,914,678.29</b>

(2) Other combinations

Portfolio name	Closing balance			Opening balance		
	Gross carrying amount	Proportion (%)	Bad debt provision	Gross carrying amount	Proportion (%)	Bad debt provision

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Portfolio name	Closing balance			Opening balance		
	Gross carrying amount	Proportion (%)	Bad debt provision	Gross carrying amount	Proportion (%)	Bad debt provision
Aluminium, energy and trading portfolio	1,708,101,457.29	6.09	104,006,848.15	1,286,222,719.65	15.59	200,522,984.70
<b>Total</b>	<b>1,708,101,457.29</b>	<b>6.09</b>	<b>104,006,848.15</b>	<b>1,286,222,719.65</b>	<b>15.59</b>	<b>200,522,984.70</b>

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5. Accounts receivable written off in current year

Debtor name	Nature of trade receivables	Write-off amount	Reason for write-off	Write-off procedure	Arising from related party transaction
Wiseson Resources (Singapore) PTE.,Ltd	Payment for goods	266,345,156.20	Determined to be uncollectible	Management approval	No
Hengbaochang Nonferrous Metal Supply Chain Management Co. Ltd	Payment for goods	113,558,726.23	Determined to be uncollectible	Management approval	No
Shanghai Guoling Industrial Co., Ltd	Payment for goods	111,422,466.39	Determined to be uncollectible	Management approval	No
Yunnan Taiyao Industrial Group Co. Ltd	Payment for goods	72,718,015.33	Determined to be uncollectible	Management approval	No
China Machinery New Energy Development Co. Ltd	The payment	5,436,096.14	Determined to be uncollectible	Management approval	No
Shandong Huayuan Iron & Steel Co. Ltd	Material money	5,420,325.00	Determined to be uncollectible	Management approval	No
Shandong Dingbezhuo International Trade Co., Ltd	Material money	5,100,180.00	Determined to be uncollectible	Management approval	No
Shanxi Jinde Chengxin Mining Co. Ltd	Payment for goods	4,900,000.00	Determined to be uncollectible	Management approval	No
Jiangxi Province Heyuan Industry Co., Ltd	Payment for goods	4,700,000.00	Determined to be uncollectible	Management approval	No
Tongren Great Wall Mining Co. Ltd	Payment for goods	4,480,000.00	Determined to be uncollectible	Management approval	No
Guizhou Wuling Mining Co. Ltd	Payment for goods	3,000,000.00	Determined to be uncollectible	Management approval	No
Qinghai Yellow River Hydropower Regeneration Aluminum Co. Ltd	The payment	2,848,299.19	Determined to be uncollectible	Management approval	No

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Debtor name	Nature of trade receivables	Write-off amount	Reason for write-off	Write-off procedure	Arising from related party transaction
Shanxi Jinaluminum Huali Construction Technology Development Co., Ltd	The payment	2,298,453.98	Determined to be uncollectible	Management approval	No
Beijing Zhongjin Shuntian Magnetic Material Co., Ltd	Payment for goods	2,126,320.54	Determined to be uncollectible	Management approval	No
Foshan One Dalai Photonic Technology Co., Ltd	Payment for goods	2,087,072.45	Determined to be uncollectible	Management approval	No
Fushi International (Dalian) Bimetal Cable Co., Ltd	Payment for goods	2,033,391.78	Determined to be uncollectible	Management approval	No
Others	Payment for goods	63,940,664.93	Determined to be uncollectible	Management approval	No
<b>Total</b>		<b>672,415,168.16</b>			

## 6. Top five debtors according to closing balances

Debtor name	Gross carrying amount	Proportion of total trade receivables (%)	Bad debt provision
State Grid Ningxia Electric Power Co. LTD	751,419,200.50	3.32	1,718,796.28
Xianyang Xinxing Investment construction Group Co	633,152,862.65	2.80	46,117,536.03
Chinalco Zibo International Trade Co., LTD	617,974,461.65	2.73	304.70
Vietnam Coal Mining Group	441,661,916.89	1.95	208,021,018.41
Yunnan Linyun Expressway Co. LTD	438,851,001.81	1.94	2,194,255.01
<b>total</b>	<b>2,883,059,443.50</b>	<b>12.74</b>	<b>258,051,910.43</b>

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**8.6 Receivables financing**

<b>Category</b>	<b>Closing balance</b>	<b>Opening balance</b>
Notes receivable	4,147,989,866.30	6,962,157,229.60
Trade receivables		
<b>Total</b>	<b>4,147,989,866.30</b>	<b>6,962,157,229.60</b>

**8.7 Advances to suppliers**

1. Aging analysis

<b>Aging</b>	<b>Closing balance</b>		
	<b>Gross carrying amount</b>		<b>Bad debt provision</b>
	<b>Amount</b>	<b>Proportion (%)</b>	
Within 1 year (including 1 year)	5,741,877,418.95	96.84	159,461.00
1-2 years (including 2 years)	81,386,237.65	1.37	379,951.29
2-3 years (including 3 years)	38,673,027.45	0.65	16,318,341.52
Over 3 years	67,783,252.93	1.14	35,507,819.66
<b>Total</b>	<b>5,929,719,936.98</b>	<b>100.00</b>	<b>52,365,573.47</b>

(Continued)

<b>Aging</b>	<b>Opening balance</b>		
	<b>Gross carrying amount</b>		<b>Bad debt provision</b>
	<b>Amount</b>	<b>Proportion (%)</b>	
Within 1 year (including 1 year)	4,001,022,314.26	92.15	270,063.10
1-2 years (including 2 years)	202,704,483.24	4.67	25,865,848.59
2-3 years (including 3 years)	53,482,489.81	1.23	2,173,402.08
Over 3 years	84,820,679.77	1.95	42,505,642.76
<b>Total</b>	<b>4,342,029,967.08</b>	<b>100.00</b>	<b>70,814,956.53</b>

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2. Significant advances to suppliers aged over one year

<b>Creditor</b>	<b>Debtor</b>	<b>Closing balance</b>	<b>Aging</b>	<b>Reason for outstanding</b>
China Copper Industry Co.,Ltd.	Jiangsu Maojin Supply Chain Management Co.,Ltd.	16,495,706.04	2-3 years	The lawsuit is in progress
China Copper Industry Co.,Ltd.	Lanping Bai Pumi Autonomous County Natural Resources Bureau	15,000,000.00	1-3 years	Not yet settled
China Copper Industry Co.,Ltd.	Yunnan Diqing Petroleum Company, SINOPEC Sales Co.,Ltd.	6,000,000.00	1-2 years	Not yet settled
Aluminum Corporation of China LTD	Mianchi Branch of China Mining Construction Group Co.,Ltd.	6,000,000.00	1-2 years	Not yet settled
Aluminum Corporation of China LTD	Zhejiang Tianzeng Construction Co.,Ltd. mianchi Branch	4,932,003.19	1-2 years	Not yet settled
Chinalco Asset Management Co.,Ltd.	Beijing Sixth Ring Industry & Trade Co.,Ltd.	4,808,329.00	over 3 years	Not yet settled
China Copper Industry Co.,Ltd.	Second Project Department of Deqin Branch of Wenzhou Dongda Mine Construction Engineering Co.,Ltd.	4,670,624.74	1-2 years	Not yet settled
China Copper Industry Co.,Ltd.	State Grid Heilongjiang Electric Power Co.,Ltd.. Daxing 'anling Power Supply Company	4,415,708.90	2-5 years	Not yet settled
China Copper Industry Co.,Ltd.	DOLPHIN TELECOM DEL PERU S.A.C.	3,819,335.92	2-3 years	Not yet settled
Chinalco Asset Management Co.,Ltd.	Seven Metallurgical Construction Group Co.,Ltd.	3,038,700.00	over 5 years	Not yet settled
Chinalco International Engineering Co.,Ltd.	Shenzhen Hengji Jiapo Decoration Design Co.,Ltd.	3,000,000.00	1-2 years	Not yet settled
Chinalco International Engineering Co.,Ltd.	Zhonggang Jiapo Architectural Design engineering (Shenzhen) Co.,Ltd.	3,000,000.00	1-2 years	Not yet settled
Chinalco Finance Co.,Ltd.	Beijing Shenzhou Huike New Technology Co.,Ltd.	2,978,761.04	1-2 years	Not yet settled
Chinalco Finance Co.,Ltd.	Beijing Bowestone	2,519,469.05	1-2 years	Not yet settled

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Creditor	Debtor	Closing balance	Aging	Reason for outstanding
	Technology Co.,Ltd.			
Aluminum Corporation of China High-end Manufacturing Co.,Ltd.	Danyang Jiangnan Industrial Furnace Co.,Ltd.	2,389,488.64	over 5 years	Not yet settled
<b>Total</b>		<b>83,068,126.52</b>		

3. Top five advances to suppliers classified by debtors at year end

Debtor name	Gross carrying amount	Proportion of total advances to suppliers (%)	Bad debt provision
TRAFIGURAPTELTD.	1,564,379,311.09	26.38	
MINERAESCONDIDALIMITAD A	552,547,610.75	9.32	
ErdenesTavanTolgoiJSC	356,601,060.00	6.01	
MITSUBISHICORPORATION RTMINT.PTE	228,498,782.37	3.85	
Jinzhou Customs of People's Republic of China	183,844,559.68	3.10	
<b>Total</b>	<b>2,885,871,323.89</b>	<b>48.66</b>	

**8.8 Other receivables**

Items	Closing balance	Opening balance
Interests receivable	16,930,013.79	301,634,348.24
Dividends receivable	468,598,284.95	602,188,142.35
Other receivables	6,078,859,875.03	8,434,056,602.21
<b>Total</b>	<b>6,564,388,173.77</b>	<b>9,337,879,092.80</b>

1. Interests receivable

(1) Classification of interest receivable

Items	Closing balance	Opening balance
Time deposits	15,437,739.02	117,498,902.86
Entrusted loans		129,006,246.86
Bond investments	951,667.65	25,999,103.49



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Others	540,607.12	29,130,095.03
<b>Total</b>	<b>16,930,013.79</b>	<b>301,634,348.24</b>

(2) Provision for doubtful accounts of interest receivable

Bad debt provision	Stage 1	Stage 2	Stage 3	Total
	Expected credit loss in the next 12 months	Expected credit loss for the entire duration (no credit impairment occurred)	Expected credit loss for the entire duration (credit impairment has occurred)	
Opening balance			1,294,389.17	1,294,389.17
The balance at the beginning of this year				
-Transfer to the second stage				
-Transfer to the third stage				
- Return to the second stage				
-Return to the first stage				
Accrual in current period			73,463,529.64	73,463,529.64
Reversal in current period				
Write off in Current period				
Recognition in current period				
Other changes				
Closing balance			<b>74,757,918.81</b>	<b>74,757,918.81</b>

2. Dividends receivable

Items	Closing balance	Opening balance	Reason for being uncollectible	Any impairment loss incurred and its basis
Dividends receivable aged within one year	105,642,449.32	388,482,437.67		

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Items	Closing balance	Opening balance	Reason for being uncollectible	Any impairment loss incurred and its basis
Huozhou Coal Power Group Hejin xuehugou Coal Industry Co., Ltd.	86,728,071.44	20,172,535.13	Announced but not issued	No
Ningxia Jingneng Ningdong Power Generation Co. Ltd.	18,914,377.88		Announced but not issued	No
State Power Ningxia Lingwu Power Generation Co. LTD		366,879,840.60		
Bank of Communications Co., Ltd Zibo Branch		991,488.96		
Shandong Shan Aluminum Electronic Technology Co., Ltd.		364,466.75		
Dongxing Securities		74,106.23		
<b>Dividends receivable aged over one year</b>	<b>362,955,835.63</b>	<b>213,705,704.68</b>		
State Power Ningxia Lingwu Power Generation Co. Ltd.	226,585,286.20		Funds are tight	No
Including: Yunnan Energy Investment Group Co., Ltd	105,560,000.00	111,300,000.00	Funds are tight	No
Baotou Sendu Carbon Co., Ltd	17,089,123.63	17,089,123.63	Funds are tight	No
Guizhou Guilu Logistics Co., Ltd	8,997,319.57	8,997,319.57	Funds are tight	No
Taiyuan Zhongse No.12 metallurgy Real Estate Development Co., Ltd	4,650,000.00	4,650,000.00	Funds are tight	No
Dongxing Securities	74,106.23		Funds are tight	No
Yunnan Simaoshan Copper Co., Ltd		65,837,387.58		
Yunnan Industrial Investment Holding Group Co., Ltd		5,831,873.90		
<b>Total</b>	<b>468,598,284.95</b>	<b>602,188,142.35</b>		

3. Other receivables

Disclose other receivables according to the method of bad debt provision

Category	Closing balance				Book value
	Gross carrying amount		Bad debt provision		
	Amount	Proportion (%)	Amount	Proportion (%)	

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Other receivables set aside allowance for bad debts on an individual basis	16,180,083,897.76	82.90	12,850,932,442.34	79.42	3,329,151,455.42
Other receivables of bad debt provision based on combination of credit risk characteristics	3,337,870,298.92	17.10	588,161,879.31	17.62	2,749,708,419.61
<b>Total</b>	<b>19,517,954,196.68</b>	<b>100.00</b>	<b>13,439,094,321.65</b>	<b>68.86</b>	<b>6,078,859,875.03</b>

(Continued)

Category	Opening balance				Book value
	Gross carrying amount		Bad debt provision		
	Amount	Proportion (%)	Amount	Proportion (%)	
Other receivables set aside allowance for bad debts on an individual basis	12,431,964,794.01	77.80	6,800,802,562.88	54.70	5,631,162,231.13
Other receivables of bad debt provision based on combination of credit risk characteristics	3,546,640,367.96	22.20	743,745,996.88	20.97	2,802,894,371.08
<b>Total</b>	<b>15,978,605,161.97</b>	<b>100.00</b>	<b>7,544,548,559.76</b>	<b>47.22</b>	<b>8,434,056,602.21</b>

Disclose other receivables according to the age of the account

Aging	Closing balance	Opening balance
Within 1 year (including 1 year)	2,219,572,252.85	3,416,368,064.93
1-2 years	2,421,950,660.78	895,253,329.58
2-3 years	4,220,704,131.61	3,603,604,583.26
3-4 years	2,816,960,248.66	2,711,627,715.64
4-5 years	2,682,876,713.62	1,978,909,701.86
More than 5 years	5,155,890,189.16	3,372,841,766.70
<b>Subtotal</b>	<b>19,517,954,196.68</b>	<b>15,978,605,161.97</b>
Less: bad debt provision	13,439,094,321.65	7,544,548,559.76
<b>Total</b>	<b>6,078,859,875.03</b>	<b>8,434,056,602.21</b>

(1) Other receivables separately prepared for bad debts at the end of the year

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Debtor name	Gross carrying amount	Bad debt provision	Expected credit loss rate(%)	Reason for recognition
Yunnan Metallurgical Yunxin Silicon Material Co., Ltd	4,785,935,423.67	4,785,935,423.67	100.00	Not expected to recover
Shanxi Jiexiu Xinyugou Coal Industry Co. Ltd	1,515,394,020.68	1,515,394,020.68	100.00	Not expected to recover
Shanghai Futures Exchange	837,882,868.69			Expected to recover
Shangri-la Hongxin Mining Co., Ltd	699,892,226.21	699,892,226.21	100.00	Not expected to recover
Fuzhou Economic Development Zone Land Development Center	684,000,000.00			Expected to recover
Ningxia Ningdian Photovoltaic Materials Co., Ltd	647,278,673.01	647,278,673.01	100.00	Not expected to recover
Guiyang Baiyun Urban Construction Investment Group Co. Ltd	483,603,400.00			Expected to recover
Midu County Jiudingshan Mining Co. Ltd	426,983,393.19	426,983,393.19	100.00	Not expected to recover
Huainan Zhongsheng Real Estate Co. Ltd	418,083,022.65	302,815,050.00	72.43	Risk of recovery
Ningxia Silver Star Polysilicon Co. Ltd	394,744,562.63	394,744,562.63	100.00	Not expected to recover
Ningxia Ning Electric Silicon Material Co., Ltd	374,538,524.62	374,538,524.62	100.00	Not expected to recover
Yunnan Chuxiong Siyuan Investment Co. Ltd	319,248,356.41	319,248,356.41	100.00	Not expected to recover
Yunnan Mingchen Import and export Co. Ltd	306,049,833.82	306,049,833.82	100.00	Not expected to recover
Shanxi Carbon Plant	226,701,960.88	154,598,532.20	68.19	Risk of recovery
Shandong Jialun Tire Co. Ltd	199,730,082.26	149,828,595.25	75.02	Risk of recovery
Xinjiang Jiarun Resources Holding Co. Ltd	196,801,762.19	104,365,136.29	53.03	Risk of recovery
SHARY INTERNATIONAL LIMITED	187,254,309.00	173,458,180.96	92.63	Risk of recovery
Yunlong County silver copper mine	180,405,000.94	180,405,000.94	100.00	Not expected to recover

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Debtor name	Gross carrying amount	Bad debt provision	Expected credit loss rate(%)	Reason for recognition
Guizhou Chalco Hengtai Mining Co. Ltd	166,114,178.93	166,114,178.93	100.00	Not expected to recover
Yunnan Yuntong Rare New Material Co., Ltd	161,914,012.18	161,914,012.18	100.00	Not expected to recover
D Group Limited	108,998,432.92	98,471,943.82	90.34	Risk of recovery
Yunnan Longbao Investment Co. Ltd	90,143,366.00	89,744,770.00	99.56	Risk of recovery
Shanghai Haichuan International Trade Co., Ltd	83,797,814.55	77,608,748.54	92.61	Risk of recovery
Chongqing Shangjiang Chen Real Estate Co., Ltd	81,815,408.39	20,453,852.10	25.00	Risk of recovery
Haikou Jinhui Trading Co., Ltd	76,000,000.34	70,386,858.50	92.61	Risk of recovery
Zunyi Yulong Aluminum Co., Ltd	75,496,739.29	54,434,318.16	72.10	Risk of recovery
Yunnan Lanjin Trading Co., Ltd	69,550,419.80	12,525,908.94	18.01	Risk of recovery
China Foreign Trade Financial Leasing Co., Ltd	69,000,000.00			Expected to recover
Jinal Industrial Corporation	68,761,726.12	68,761,726.12	100.00	Not expected to recover
Haitian Investment Management Co., Ltd	63,865,671.32	63,865,671.32	100.00	Not expected to recover
Dalian Commodity Exchange	62,556,647.90			Expected to recover
BOCI Global Commodities (UK) Limited	61,541,516.25			Expected to recover
Yunnan Jinggu Mining and Metallurgy Co. LTD	60,500,114.80	60,500,114.80	100.00	Not expected to recover
Shanghai United Equity Exchange Co. LTD	57,210,000.00			Expected to recover
Chinalco Guizhou Industrial Service Co. LTD	53,837,655.76	53,837,655.76	100.00	Not expected to recover
Zhengzhou Aluminum City Industrial Development Corporation	53,005,493.86	52,131,259.30	98.35	Risk of recovery
Other merchants	1,831,447,278.50	1,264,645,913.99	64.35	Risk of recovery



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Debtor name	Gross carrying amount	Bad debt provision	Expected credit loss rate(%)	Reason for recognition
<b>Total</b>	<b>16,180,083,897.76</b>	<b>12,850,932,442.34</b>		

(2) Other Receivables that are Collectively Assessed for Impairment as in a Group of Receivables of Shared Credit Risk Characteristics

1) Aging combination

Aging	Closing balance			Opening balance		
	Gross carrying amount		Bad debt provision	Gross carrying amount		Bad debt provision
	Amount	Proportion (%)		Amount	Proportion (%)	
Within 1 year (including 1 year)	1,360,833,166.40	51.81	7,712,450.93	919,671,655.39	42.16	16,343,355.14
1-2 years	336,335,369.86	12.81	33,191,852.84	390,370,247.07	17.90	37,867,270.58
2-3 years	257,522,941.85	9.80	52,532,116.18	255,003,475.35	11.69	51,147,592.24
3-4 years	219,394,611.16	8.35	67,673,996.65	149,635,051.11	6.86	45,342,686.46
4-5 years	126,629,253.09	4.83	63,718,141.31	77,748,089.19	3.56	40,928,956.83
Over 5 years	325,774,374.82	12.40	325,774,374.82	388,795,377.77	17.83	388,795,377.77
<b>Total</b>	<b>2,626,489,717.18</b>	<b>100.00</b>	<b>550,602,932.73</b>	<b>2,181,223,895.88</b>	<b>100.00</b>	<b>580,425,239.02</b>

2) Other combinations

Portfolio name	Closing balance			Opening balance		
	Amount	Proportion (%)	Bad debt provision	Amount	Proportion (%)	Bad debt provision
Other combinations	711,380,581.74	5.28	37,558,946.58	1,365,416,472.08	11.96	163,320,757.86
<b>Total</b>	<b>711,380,581.74</b>	<b>5.28</b>	<b>37,558,946.58</b>	<b>1,365,416,472.08</b>	<b>11.96</b>	<b>163,320,757.86</b>

(3) Other accounts receivable bad debt provision

Bad debt provision	Stage 1	Stage 2	Stage 3	Total
	Expected credit loss in the next 12 months	Expected credit loss for the entire duration (no credit impairment occurred)	Expected credit loss for the entire duration (credit impairment has occurred)	
Opening balance	209,141,724.21	203,526,687.60	7,131,880,147.95	7,544,548,559.76

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Bad debt provision	Stage 1	Stage 2	Stage 3	Total
	Expected credit loss in the next 12 months	Expected credit loss for the entire duration (no credit impairment occurred)	Expected credit loss for the entire duration (credit impairment has occurred)	
The balance at the beginning of this year				
-Transfer to the second stage	-2,177,953.77	2,177,953.77		
-Transfer to the third stage	-2,105,528.92	-47,003,315.71	49,108,844.63	
- Return to the second stage				
-Return to the first stage				
Accrual in current period	2,000,819.55	60,808,999.70	1,578,030,238.16	1,640,840,057.41
Reversal in current period	-4,101,395.90	-2,419,905.83	-170,018,599.94	-176,539,901.67
Write off in Current period	-901,926.17	-5,000.00	-27,122,418.40	-28,029,344.57
Recognition in current period	-17,562,235.30	-10,979,423.33	-338,731,998.48	-367,273,657.11
Other changes	-18,336,953.71	93,965,190.64	4,749,920,370.90	4,825,548,607.83
<b>Closing balance</b>	<b>165,956,549.99</b>	<b>300,071,186.84</b>	<b>12,973,066,584.82</b>	<b>13,439,094,321.65</b>

(4) The book balance of other receivables changes as follows

Gross carrying amount	Stage 1	Stage 2	Stage 3	Total
	Expected credit loss in the next 12 months	Expected credit loss for the entire duration (no credit impairment occurred)	Expected credit loss for the entire duration (credit impairment has occurred)	
Opening balance	3,720,907,529.67	2,770,513,526.74	9,487,184,105.56	15,978,605,161.97
The balance at the beginning of this year				
-Transfer to the second stage	-331,376,144.20	331,376,144.20		

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Gross carrying amount	Stage 1	Stage 2	Stage 3	Total
	Expected credit loss in the next 12 months	Expected credit loss for the entire duration (no credit impairment occurred)	Expected credit loss for the entire duration (credit impairment has occurred)	
-Transfer to the third stage	-38,771,617.89	-217,789,935.02	256,561,552.91	
- Return to the second stage				
-Return to the first stage				
Increase in current year	2,773,042,793.51	672,270,584.49	12,465,822,871.10	15,911,136,249.10
Current year Termination recognition	-3,017,264,031.51	-213,827,998.42	-574,032,709.48	-3,805,124,739.41
Other changes	-28,961,633.49	-5,562,668.32	-8,532,138,173.17	-8,566,662,474.98
<b>Closing balance</b>	<b>3,077,576,896.09</b>	<b>3,336,979,653.67</b>	<b>13,103,397,646.92</b>	<b>19,517,954,196.68</b>

(5) Write-offs in current year

Debtor name	Nature of other receivables	Write-off amount	Reason for write-off	Write-off procedure	Arising from related party transaction?
Hengbaochang Nonferrous Metal Supply Chain Management Co. LTD	Payment for goods	96,370,140.61	Determined to be uncollectible	Management approval	No
Guizhou Bijie Chahe Town Baiyanjiao coal mine	Come-and-go money	59,633,643.25	Determined to be uncollectible	Management approval	No
Tianjin Datong Copper Co., LTD	Payment for goods	42,415,947.68	Determined to be uncollectible	Management approval	No
Western Mining Investment (Tianjin) Co., LTD	Payment for goods	30,100,000.00	Determined to be uncollectible	Management approval	No
Astor Company	Project investment	21,509,463.35	Determined to be uncollectible	Management approval	No
Xinjiang Uygur Autonomous Region Foreign Trade Storage Company	Payment for goods	14,144,085.71	Determined to be uncollectible	Management approval	No
Yunnan Taiyao Industrial Group Co. LTD	Case enforcement	10,564,681.91	Determined to be uncollectible	Management approval	No

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Debtor name	Nature of other receivables	Write-off amount	Reason for write-off	Write-off procedure	Arising from related party transaction?
	fee				
Yunnan Huateng New Energy Co. LTD	Loan account	8,355,655.67	Determined to be uncollectible	Management approval	No
Shaanxi Hongji Industrial Group Co. LTD	Payment for goods	6,174,081.00	Determined to be uncollectible	Management approval	No
Shenzhen Huakang electric Co. LTD	Payment for goods	5,837,979.23	Determined to be uncollectible	Management approval	No
Shanghai Guoling Industrial Co., LTD	Payment for goods	5,641,555.83	Determined to be uncollectible	Management approval	No
Shenzhen Hongli Yuanda Trading Co., LTD	Payment for goods	5,025,500.06	Determined to be uncollectible	Management approval	No
Notte Copper Co., LTD. (Hong Kong)	Payment for goods	3,441,187.84	Determined to be uncollectible	Management approval	No
Zibo Development Zone Innovation Economic and trade Company	Payment for goods	2,876,721.80	Determined to be uncollectible	Management approval	No
Yuxi Rongtai Industry and Trade Co. LTD	Come-and-go money	2,307,782.96	Determined to be uncollectible	Management approval	No
Chalco Xinjiang Aluminum power Co. LTD	Other	18,069,236.89	Determined to be uncollectible	Management approval	No
ICBS	Other	16,458,940.19	Determined to be uncollectible	Management approval	No
Guizhou Xingxin Industrial Co	Other	3,000,000.00	Determined to be uncollectible	Management approval	No
Other merchants	Other	17,890,492.11	Determined to be uncollectible	Management approval	No
<b>Total</b>	;	369,817,096.09			

(6) Top five debtors according to closing balances

Debtor name	Nature of receivables	Gross carrying amount	Aging	Proportion of total other receivables (%)	Allowance for doubtful accounts
Yunnan Metallurgical Yunxin Silicon Material Co., LTD	Lend money	4,785,935,423.67	Within 1 year	24.52	4,785,935,423.67

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Debtor name	Nature of receivables	Gross carrying amount	Aging	Proportion of total other receivables (%)	Allowance for doubtful accounts
			1-5 years		
Shanxi Jiexiu Xinyugou Coal Industry Co. LTD	Lend money	1,515,394,020.68	over 3 years	7.76	1,515,394,020.68
Shanghai Futures Exchange	Margin	1,462,923,538.66	Within 1 year	7.50	643,662.54
Fuzhou Economic Development Zone Land Development Center	Land collection and reserve	684,000,000.00	2-5 years	3.50	
Ningxia Ningdian Photovoltaic Materials Co., LTD	Lend money	647,278,673.01	over 3 years	3.32	647,278,673.01
<b>Total</b>		<b>9,095,531,656.02</b>		<b>46.60</b>	<b>6,949,251,779.90</b>

**8.9 Inventories**

Items	Closing balance		
	Gross carrying amount	Write-down	Carrying amount
Raw materials	15,025,821,638.86	933,909,630.75	14,091,912,008.11
Semi-finished products and work-in-process	22,685,139,254.09	398,808,048.41	22,286,331,205.68
Merchandise (Finished goods)	11,644,119,934.64	817,652,314.38	10,826,467,620.26
Reusable materials (Packaging materials, Low-valued consumables etc.)	69,578,735.92	3,507,344.38	66,071,391.54
Others	1,494,031,131.69	30,348,731.04	1,463,682,400.65
<b>Total</b>	<b>50,918,690,695.20</b>	<b>2,184,226,068.96</b>	<b>48,734,464,626.24</b>

(Continued)

Items	Opening balance		
	Gross carrying amount	Write-down	Carrying amount

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Items	Opening balance		
	Gross carrying amount	Write-down	Carrying amount
Raw materials	16,921,180,409.59	602,655,844.32	16,318,524,565.27
Semi-finished products and work-in-process	22,524,555,014.43	289,975,214.76	22,234,579,799.67
Merchandise (Finished goods)	11,910,818,035.90	549,315,802.18	11,361,502,233.72
Reusable materials (Packaging materials, Low-valued consumables etc.)	136,367,934.14	4,662,839.88	131,705,094.26
Others	1,663,614,592.92	21,950,299.64	1,641,664,293.28
<b>Total</b>	<b>53,156,535,986.98</b>	<b>1,468,560,000.78</b>	<b>51,687,975,986.20</b>

**8.10 Contract assets**

1. Contract assets

Items	Closing balance			Opening balance		
	Gross carrying amount	Impairment loss	Carrying amount	Gross carrying amount	Impairment loss	Carrying amount
Contract assets with single item appraisal and provision for impairment	1,526,213,833.45	557,971,127.70	968,242,705.75	1,269,548,530.74	587,483,154.80	682,065,375.94
Contract assets with provision for impairment based on Combination	6,413,267,405.75	112,450,416.66	6,300,816,989.09	7,104,794,902.97	114,844,587.00	6,989,950,315.97
<b>Total</b>	<b>7,939,481,239.20</b>	<b>670,421,544.36</b>	<b>7,269,059,694.84</b>	<b>8,374,343,433.71</b>	<b>702,327,741.80</b>	<b>7,672,015,691.91</b>

2. Impairment loss for contract assets

Items	Opening balance	This provision	Return this year	Current year resale/verification	Closing balance	reason
Contract assets with single item appraisal and provision for impairment	587,483,154.80	25,141,868.79	54,653,895.89		557,971,127.70	
Contract assets with provision for impairment based on Combination	114,844,587.00	6,705,676.24	9,099,846.58		112,450,416.66	
<b>Total</b>	<b>702,327,741.80</b>	<b>31,847,545.03</b>	<b>63,753,742.47</b>		<b>670,421,544.36</b>	



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**8.11 Non-current assets due within one year**

Items	Closing balance	Opening balance
Finance lease receivable within one year	3,083,057,687.68	2,012,816,264.40
Discounted assets and short-term loans	1,017,680,239.43	53,139,811.59
Factoring receivable due within one year	867,512,085.24	714,683,477.95
Long-term receivables due within one year	454,944,813.20	727,292,975.94
Others	3,801,457.63	10,001,470.05
<b>Total</b>	<b>5,426,996,283.18</b>	<b>3,517,933,999.93</b>

**8.12 Other current assets**

Items	Closing balance	Opening balance
Input tax to be deducted	2,092,126,759.75	3,828,045,606.35
Prepaid tax	351,575,497.33	351,940,209.60
Carbon emission rights assets	30,932.13	59,549.52
Entrusted Loan	70,070,902.92	2,611,866,720.80
Repurchase business factoring	633,910,693.07	180,000,000.00
Derivative financial instruments	655,054,348.32	736,769,645.77
Others	111,183,725.44	
<b>Total</b>	<b>3,913,952,858.96</b>	<b>7,708,681,732.04</b>

**8.13 Other investment on bonds**

## 1. Other creditor's rights investment

Items	Closing balance	Opening balance
Bond investment	2,895,894,900.00	3,132,581,080.00
Interbank CD investment	2,690,092,250.00	2,023,423,050.00
<b>Total</b>	<b>5,585,987,150.00</b>	<b>5,156,004,130.00</b>

## 2. Other important bond investments at the end of the year

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Other debt investment projects	Face value	Amortized cost	Fair value	Accumulative amount of changes in fair value recorded in other comprehensive income	Provision for impairment has been made
17China Development Bank 15	470,000,000.00	507,569,247.11	508,964,410.00	1,395,162.89	
17China Development Bank 10	340,000,000.00	367,628,459.07	369,017,300.00	1,388,840.93	
21Industrial BankCD463	340,632,600.00	341,838,813.15	342,117,650.00	278,836.85	269,419.72
20PanGangY1	320,000,000.00	325,230,487.57	327,633,280.00	2,402,792.43	256,329.89
21China Construction Bank CD203	292,027,500.00	293,753,054.79	293,943,300.00	190,245.21	231,521.01
21China Zhe shang BankCD199	291,885,600.00	293,552,942.47	293,718,300.00	165,357.53	231,363.29
21China Minsheng BankCD 300	291,970,800.00	293,620,635.62	293,718,000.00	97,364.38	231,416.64
21Hua Xia BankCD287	291,970,800.00	293,004,696.98	293,243,700.00	239,003.02	230,931.19
21China Everbright BankC D200	291,970,800.00	293,004,696.98	293,243,700.00	239,003.02	230,931.19
21Ping An BankCD245	291,999,300.00	293,007,607.40	293,222,700.00	215,092.60	230,933.48
21China CITIC BankCD164	292,027,500.00	292,835,671.23	293,034,600.00	198,928.77	230,797.97
18 China Development Bank 10	270,000,000.00	291,413,057.99	292,189,950.00	776,892.01	
20AnGang MTN006	270,000,000.00	279,254,133.87	279,270,990.00	16,856.13	
20ShouGang MTN003A	200,000,000.00	204,644,109.61	205,285,200.00	641,090.39	161,289.93
21 Bank of Communications CD282	194,647,200.00	195,747,090.41	195,905,600.00	158,509.59	154,277.76
21 ShanCoal Y3	150,000,000.00	151,947,755.72	151,616,100.00	-331,655.72	119,757.38
20 ShouGang MTN002B	100,000,000.00	103,208,109.62	104,980,000.00	1,771,890.38	81,343.31
21 Jin Coking Coal MTN006	100,000,000.00	100,694,423.05	101,696,100.00	1,001,676.95	79,362.15
21Hua Xia BankCD246	97,323,600.00	97,873,545.21	97,944,700.00	71,154.79	
20AnGang Steel Assembly MTN002	80,000,000.00	81,832,964.72	83,037,120.00	1,204,155.28	64,496.52

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Other debt investment projects	Face value	Amortized cost	Fair value	Accumulative amount of changes in fair value recorded in other comprehensive income	Provision for impairment has been made
21 ShanXi Coal Chemical MTN007	70,000,000.00	71,021,868.80	71,289,750.00	267,881.20	55,975.77
20ShouGang MTN003B	60,000,000.00	61,580,383.58	62,116,140.00	535,756.42	48,534.48
20 LuAn MTN005	60,000,000.00	61,080,000.01	61,532,400.00	452,399.99	48,140.11
20AnGang Steel Set MTN001	50,000,000.00	51,179,574.47	51,930,750.00	751,175.53	40,337.10
20ShouGang MTN005	50,000,000.00	50,855,999.99	51,646,550.00	790,550.01	40,082.08
16China Development Bank 13	50,000,000.00	50,484,268.70	50,963,900.00	479,631.30	
21ShanXi coalY4	40,000,000.00	40,239,281.05	40,178,480.00	-60,801.05	31,714.53
20CLP voteMTN009B	20,000,000.00	20,492,451.04	20,687,900.00	195,448.96	16,151.09
20ShanDong energyMTN005	20,000,000.00	20,330,126.04	20,665,300.00	335,173.96	
20Jin Coking CoalMTN002	20,000,000.00	20,475,424.65	20,502,060.00	26,635.35	16,137.67
20Yan KuangMTN002	10,000,000.00	10,486,308.82	10,351,110.00	-135,198.82	
20AnGang MTN004	10,000,000.00	10,328,307.64	10,340,110.00	11,802.36	8,140.24
<b>Total</b>	<b>5,436,455,700.00</b>	<b>5,570,215,497.36</b>	<b>5,585,987,150.00</b>	<b>15,771,652.64</b>	<b>3,109,384.50</b>

**8.14 Long-term receivables**

Items	Closing balance			Opening balance		
	Gross carrying amount	Bad debt provision	Carrying amount	Gross carrying amount	Bad debt provision	Carrying amount
Finance lease payments	3,702,446,110.41	73,874,926.90	3,628,571,183.51	2,178,383,882.44	66,403,879.42	2,111,980,003.02
Including: Unearned finance income	404,699,549.99		404,699,549.99	535,111,562.67		535,111,562.67
Installment sale of merchandise						
Installment sale of services	1,654,280,215.23	258,897,245.86	1,395,382,969.37	727,421,368.17	47,975,409.16	679,445,959.01

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Others	464,053,103.57	129,481,137.02	334,571,966.55	3,668,103,380.59	287,647,485.45	3,380,455,895.14
<b>Total</b>	<b>5,820,779,429.21</b>	<b>462,253,309.78</b>	<b>5,358,526,119.43</b>	<b>6,573,908,631.20</b>	<b>402,026,774.03</b>	<b>6,171,881,857.17</b>

**8.15 Long-term equity investments**

## 1. Classification of long-term equity investments

<b>Items</b>	<b>Opening balance</b>	<b>Increase in current year</b>	<b>Decrease in current year</b>	<b>Closing balance</b>
Investments in joint ventures	4,236,421,735.60	322,837,036.34	273,978,555.10	4,285,280,216.84
Investments in associates	23,336,072,177.87	1,363,788,633.25	2,402,225,466.18	22,297,635,344.94
Subtotal	<b>27,572,493,913.47</b>	<b>1,686,625,669.59</b>	<b>2,676,204,021.28</b>	<b>26,582,915,561.78</b>
Less: Impairment loss for long-term equity investments	432,043,167.90	10,568,187.57	58,122,448.48	384,488,906.99
<b>Total</b>	<b>27,140,450,745.57</b>	<b>1,676,057,482.02</b>	<b>2,618,081,572.80</b>	<b>26,198,426,654.79</b>

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2. Details of long-term equity investments

Investee	Cost of investments	Opening balance	Increase/ decrease in current year							Closing balance	Closing balance of impairment loss	
			Additional investments	Decrease in investments	Investment gain or loss recognized under equity method	Adjustment in other comprehensive income	Other changes in equity	Cash dividends declared and profits to be distributed	Impairment loss			Others
<b>Total</b>	<b>26,532,008,448.91</b>	<b>27,572,493,913.47</b>	<b>1,878,967,397.37</b>	<b>2,158,848,561.97</b>	<b>123,110,877.86</b>	<b>-172,114,864.55</b>	<b>-147,318,676.72</b>	<b>517,355,459.31</b>		<b>3,980,935.63</b>	<b>26,582,915,561.78</b>	<b>384,488,906.99</b>
<b>I. Joint ventures</b>	<b>3,876,859,969.19</b>	<b>4,236,421,735.60</b>	<b>1,600,000.00</b>	<b>30,000.00</b>	<b>294,240,997.44</b>		<b>4,209,886.38</b>	<b>273,948,555.10</b>		<b>22,786,152.52</b>	<b>4,285,280,216.84</b>	<b>229,267,741.51</b>
Guangxi Huayin Aluminum Industry Co., Ltd.	805,855,670.22	1,477,162,218.27			67,844,750.15			99,000,000.00		-2,258,081.86	1,443,748,886.56	
Shanxi Jiexiu Xinyugou Coal Industry Co., Ltd.	346,068,453.57	11,335,369.02			-11,335,369.02							
Petrochina Chinalco (Beijing) Petrochemical Co., Ltd.	15,000,000.00	19,174,665.92			2,933,437.84			584,109.96			21,523,993.80	
Loudi Zhongyu New Material Co., Ltd.	40,000,000.00	41,423,531.81			202,404.90						41,625,936.71	
Shaanxi Chengcheng Dongdong Coal Industry Co., Ltd.	200,209,800.00	41,706,731.74			-6,749,733.15						34,956,998.59	
Datong Coal Group Huasheng Wanjie Coal Industry Co., Ltd.	142,488,247.20	213,671,856.24			22,964,732.91		2,318,306.54				238,954,895.69	
Guizhou Chalco Hengtai Mining Co., Ltd.	401,800,000.00	216,952,867.61			-0.01						216,952,867.60	216,952,867.60
Henan Chalco Lichuang Mining Co., Ltd.	4,900,000.00	5,078,425.74			35,483.45						5,113,909.19	
Chinalco Zibo International Trade Co., Ltd.	18,473,979.00	24,083,524.15			10,103,998.00						34,187,522.15	

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Investee	Cost of investments	Opening balance	Increase/ decrease in current year								Closing balance	Closing balance of impairment loss
			Additional investments	Decrease in investments	Investment gain or loss recognized under equity method	Adjustment in other comprehensive income	Other changes in equity	Cash dividends declared and profits to be distributed	Impairment loss	Others		
Shaanxi Provincial Power Dingbian Energy Co., Ltd.	44,100,000.00	53,645,249.68			-77,247.45						53,568,002.23	
Ningxia Tianjing Shenzhou Wind Power Generation Co. Ltd.	22,779,566.80	25,739,435.98			-42,669.42						25,696,766.56	
Zhengzhou Light research Alloy Technology Co., Ltd.	2,499,567.00	14,015,800.91			5,171,550.21						19,187,351.12	
Guangxi Hualei New Material Co., Ltd.	992,176,000.00	1,071,006,405.51			75,405,376.00			75,405,376.00			1,071,006,405.51	
Zhongheng Cooperation Investment Co., Ltd.	31,685,566.00	32,059,752.22			371,126.49						32,430,878.71	
China Merchants Products Co., Ltd.	97,414,649.00	148,320,691.67			26,175,502.61			62,396,132.29			112,100,061.99	
Yunnan Simao Shanshui Copper Co., Ltd.	393,817,788.00	573,857,805.99			117,749,833.77		1,870,008.02	35,894,736.85		29,575,372.49	687,158,283.42	
Transportadora Callao S.A.	25,294,324.97	9,151,127.88			293,550.25					-212,555.06	9,232,123.07	
Zhongxi Oriental permanent magnet Motor Co., Ltd.	21,000,000.00	20,172,594.11			-3,988,612.36						16,183,981.75	
China Innovation Materials (Beijing) Rare Earth New Materials Technology Innovation Center Co., Ltd.	1,350,000.00	1,350,000.00			-13,877.82						1,336,122.18	
Jiangsu Guoyuan Rare Earth New Materials	39,599,900.00	40,266,402.03			-1,099,854.45						39,166,547.58	

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			Additional investments	Decrease in investments	Investment gain or loss recognized under equity method	Adjustment in other comprehensive income	Other changes in equity	Cash dividends declared and profits to be distributed	Impairment loss	Others		
Co., Ltd.												
Guangxi Guoxing Rare Earth Mining Co., Ltd.	58,403,293.91	52,719,233.13			-10,880,773.88						41,838,459.25	
Guangdong Maoming Xinxiang Property Management Co., Ltd.	9,797,583.52	8,573,812.31									8,573,812.31	8,573,812.31
Shandong Shanal Ensa Environmental Technology Co., Ltd.	4,900,000.00	4,495,993.48			-177,410.43					-4,318,583.05		
Chinalco Industrial Service Technology Co., Ltd.	5,000,000.00	3,880,322.81			-139,261.21						3,741,061.60	3,741,061.60
Xining Huayue Industrial Service Co., Ltd.	5,000,000.00	4,394,747.51			-273,100.00						4,121,647.51	
Shenyang Lewanjia Housekeeping Service Co., Ltd.	30,000.00	30,000.00		30,000.00								
Jiangxi Kaitou New Oxygen Household Co., Ltd.	1,000,000.00	999,340.91									999,340.91	
Fujian Kaitou Meichao Household Co., Ltd.	800,000.00	797,773.70	600,000.00								1,397,773.70	
Chongqing Shangjiang Chen Real Estate Co., Ltd.	19,500,000.00	2,073,331.60			396,362.26						2,469,693.86	
Sinopharm (Chongqing) Health Care	58,010,000.00	58,122,560.70			-2,414,729.82						55,707,830.88	



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Investee	Cost of investments	Opening balance	Increase/ decrease in current year								Closing balance	Closing balance of Impairment loss
			Additional investments	Decrease in investments	Investment gain or loss recognized under equity method	Adjustment in other comprehensive income	Other changes in equity	Cash dividends declared and profits to be distributed	Impairment loss	Others		
Management Co., Ltd.												
Shanghai Fengtong Investment Management Co., Ltd.	40,000,000.00	8,896,248.22			-6,547.37						8,889,700.85	
Zhongji Shanhe Technology Co., Ltd.	26,905,600.00	51,263,914.75			1,995,865.67		581,489.37	668,200.00			53,173,069.79	
Chinalco International Energy Saving Technology (Beijing) Co., Ltd.	1,000,000.00		1,000,000.00		-203,790.68		-559,917.55				236,291.77	
<b>II. Associates</b>	<b>22,655,148,479.72</b>	<b>23,336,072,177.87</b>	<b>1,877,367,397.37</b>	<b>2,158,818,561.97</b>	<b>-171,130,119.58</b>	<b>-172,114,864.55</b>	<b>-151,528,563.10</b>	<b>243,406,904.21</b>		<b>-18,805,216.89</b>	<b>22,297,635,344.94</b>	<b>155,221,165.48</b>
China Construction Aluminum New Material Co., Ltd.	200,000,000.00	212,727,892.60			1,789,770.25						214,517,662.85	
Beijing International Mining Rights Exchange Co., Ltd.	10,000,000.00	1,383,579.85			-942,234.66						441,345.19	
Beijing Zhongan Kechuang Technology Development Co., Ltd.	30,000,000.00	34,693,821.15			-779,130.07						33,914,691.08	
Chinalco (Beijing) Fund Management Co., Ltd.	14,000,000.00	19,282,905.29			1,046,521.47						20,329,426.76	
China Rare Earth Group Co., Ltd.	20,330,000.00		20,330,000.00								20,330,000.00	
Shanxi Qin Aluminum Taiyue New Material	4,959,967.60	4,801,808.63			-2,390.73						4,799,417.90	

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			Additional investments	Decrease in investments	Investment gain or loss recognized under equity method	Adjustment in other comprehensive income	Other changes in equity	Cash dividends declared and profits to be distributed	Impairment loss	Others		
Co., Ltd.												
Qinghai Energy Development (Group) Co., Ltd.	755,000,000.00	614,034,036.79			7,976,198.48						2,550,963.34	624,561,198.61
Guangxi Huazeng Aluminum Co., Ltd.	35,000,000.00	34,243,165.14		33,740,764.71	-502,400.43							
Duofudo (Fushun) Technology Development Co., Ltd.	36,750,000.00	6,110,121.83		7,368,138.86	1,258,017.03							
Chalco See top Intelligent Technology Co., Ltd.	42,000,000.00	17,623,797.13			-4,894,994.03							12,728,803.10
Huozhou Coal power group Hejin Xue Hugou Coal Industry Co., Ltd.	68,600,000.00	192,608,124.41			-13,905,733.18		1,512,894.90	103,323,948.01				76,891,338.12
Guizhou Yuneng Mining Co., Ltd.	473,080,400.00	43,413,850.81			-43,413,850.81							
Huadian Ningxia Lingwu Power Generation Co., Ltd.	717,583,603.07	923,089,973.80			-382,611,556.51			51,099,299.05				489,379,118.24
Ningxia Jingneng Ningdong Power Generation Co., Ltd.	315,000,000.00	393,784,451.77			-194,293,535.90			18,914,377.48				180,576,538.39
Baotou Tiancheng Aluminum Co., Ltd.	20,930,000.00	832,696.27			20,242.60							852,938.87
Inner Mongolia Fengrong Distribution Power	4,000,000.00		4,065,530.13		-1,870,740.25							2,194,789.88

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			Additional investments	Decrease in investments	Investment gain or loss recognized under equity method	Adjustment in other comprehensive income	Other changes in equity	Cash dividends declared and profits to be distributed	Impairment loss	Others			
Co., Ltd.													
Baotou Sendu Carbon Co., Ltd.	245,000,000.00	251,789,921.59			32,880,907.47				10,260,000.00			274,410,829.06	
Inner Mongolia Gelugou Energy Co., Ltd.	300,000.00	300,000.00										300,000.00	
Guangxi Huazhong Building Materials Co., Ltd.	42,875,000.00	37,819,368.95		42,875,000.00	18,895,693.84							13,840,062.79	
Baise new aluminum power Co., Ltd.	48,000,000.00	50,536,137.46			5,996,413.00							56,532,550.46	
Shandong Shanai Electronic Technology Co., Ltd.	7,473,066.04	10,459,064.09			1,164,835.66				212,726.45			11,411,163.30	
Huozhou Coal power Group Xingsheng Yuan Coal Industry Co., Ltd.	289,669,560.00	229,237,225.00			-35,020,379.00							194,216,846.00	
Shanxi Huatuo Aluminum Co., Ltd.	6,234,300.00	3,953,220.87			2,023,416.37							5,976,637.24	
Kunming Hualian Indium Industry Co., Ltd.	1,313,500.00	6,269,172.11		1,313,500.00				-2,426,547.81			-2,529,124.30		
Ma Guan Yun Copper and Zinc Industry Co., Ltd.	134,450,250.00	268,349,811.73			-36,328,327.55							232,021,484.18	18,943,671.98
Wenshan Tianlong Zinc Industry Co., Ltd.	9,141,400.00	4,954,298.51										4,954,298.51	4,954,298.51
Huilii County Hongshan Mining Co., Ltd.	7,000,000.00	8,443,082.20										8,443,082.20	

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			Additional investments	Decrease in investments	Investment gain or loss recognized under equity method	Adjustment in other comprehensive income	Other changes in equity	Cash dividends declared and profits to be distributed	Impairment loss	Others		
Huili Mineral Products Development Co., Ltd.	4,000,000.00	23,631,221.89			-3,385,964.89						20,245,257.00	
Yunnan Southeast Asia Economic and technological Investment Industrial Co., Ltd.	35,335,670.30	188,962,576.51			13,652,448.91						202,615,025.42	
Cambodia Hydropower Development Co., Ltd.	60,000,000.00	130,507,937.54			10,591,979.48						141,099,917.02	
Lualaba Copper Smelting Co., Ltd.	329,376,952.00	367,998,771.91			-5,957,356.09					-7,531,616.00	354,509,799.82	
Hong Kong xinsheng trading Co., Ltd.	3,600.00	43,146,829.11			32,911,583.68						76,058,412.79	
Yunnan Chenxing Mining & Metallurgy Technology Development Co., Ltd.	4,729,298.92	4,998,313.03			29,140.18			744,116.42			4,283,336.79	
Kunming Jinsharen Chemical Co., Ltd.	5,952,000.00	21,848,811.41		22,147,285.17	298,473.76							
Chambishi Copper Smelting Co., Ltd.	275,046,905.98	1,789,399,998.71			275,728,741.17	-195,676,659.78	-150,377,256.72				1,719,074,823.38	
Aojin Mining Co., Ltd.	11,592,147.89	20,832,645.38		20,832,645.38								
Chalco Luoyang Copper Equipment Technology Co., Ltd.	3,600,000.00	1,940,995.93			-574,502.31						1,366,493.62	
Yunnan Yunchuang Bidding Co., Ltd.	4,674,336.00	5,003,167.60		4,674,336.00						-328,831.60		
Yunnan Jinshui Zhonghe Health Industry	4,500,000.00	4,500,000.00									4,500,000.00	4,500,000.00

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Investee	Cost of investments	Opening balance	Increase/ decrease in current year								Closing balance	Closing balance of impairment loss
			Additional investments	Decrease in investments	Investment gain or loss recognized under equity method	Adjustment in other comprehensive income	Other changes in equity	Cash dividends declared and profits to be distributed	Impairment loss	Others		
Investment And Operation Co., Ltd.												
Yunnan Tianye Chemical Co., Ltd.	107,425,600.00	103,886,436.70			3,699,730.02				1,526,685.49			106,059,481.23
Qujing Zhanyi District Jiecheng Logistics Co., Ltd.	39,445,000.00	50,960,539.18			521,878.57							51,482,417.75
China Color international alumina development Co., Ltd.	10,000,000.00	13,382,520.20			-1,270,002.33							12,112,517.87
Yunnan Suotongyun Aluminum carbon Material Co., Ltd.	167,960,000.00	167,699,251.95			-2,099,361.15							165,599,890.80
Yunnan Anye Safety Production Technology Co., Ltd.	1,750,000.00	1,109,177.76		1,750,000.00							640,822.24	
Huize Jingdong Motor Vehicle Testing Co., Ltd.	810,000.00	1,172,514.33			75,692.67							1,248,207.00
Yunnan Gold Co., Ltd.	36,000,000.00	37,637,605.41			-349,693.30			-237,432.51				37,050,479.60
Yunnan Yunye Zhongxin New Plastic Wood Material Co., Ltd.	28,998,402.27	28,588,205.66		34,379,404.85							5,791,199.19	
Sichuan Liwu Copper Industry Co., Ltd.	18,171,500.00		18,171,500.00		30,685,405.62	23,561,795.23						72,418,700.85
Yunnan Yuntong Macuan Non-ferrous	13,465,872.32				5,784,176.29							5,784,176.29

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Investee	Cost of investments	Opening balance	Increase/ decrease in current year								Closing balance	Closing balance of impairment loss
			Additional investments	Decrease in investments	Investment gain or loss recognized under equity method	Adjustment in other comprehensive income	Other changes in equity	Cash dividends declared and profits to be distributed	Impairment loss	Others		
Metals Co., Ltd.												
Kunming Dayuan Pawn Co., Ltd.	1,179,180.00		1,179,180.00								1,179,180.00	
Zhongxi (Sichuan) Rare Earth Co., Ltd.	26,800,000.00	28,631,907.64			805,375.31						29,437,282.95	
Youyan Rare Earth New Materials Co., Ltd.	24,354,687.82	145,944,356.67			4,788,757.65				5,637,815.84		145,095,298.48	
Hebei Xiongan Rare Earth Functional Materials Innovation Center Co., Ltd.	5,000,000.00	5,000,000.00			46,448.31						5,046,448.31	
Jiangsu Bion Electronic Materials Co., Ltd.	7,000,000.00	6,827,125.97									6,827,125.97	6,827,125.97
Tengchong Zhonghui Mining Co., Ltd.	3,500,000.00	3,265,248.96		3,557,448.16	292,199.20							
Shangqiu Xinglin Electronic Industry Co., Ltd.	21,255,500.00	24,769,615.89			3,892,760.51						28,662,376.40	
Rare earth Catalytic Innovation Research Institute (Dongying) Co., Ltd.	1,580,000.00	2,472,592.78			15,678.23						2,488,271.01	
Guangxi Guorui Scandium New Material Technology Co., Ltd.	1,050,000.00	1,138,319.47			-476,561.38						661,758.09	
Zhongxi (Yixing) Rare earth New Materials Co., Ltd.	19,482,752.67		28,420,000.00		-1,813,077.86					-8,741,566.62	17,865,355.52	
Guizhou Zhongtian Aluminum Real Estate	300,000,000.00	292,504,030.82			-20,928,718.55						271,575,312.26	

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Investee	Cost of investments	Opening balance	Increase/ decrease in current year								Closing balance	Closing balance of impairment loss
			Additional investments	Decrease in investments	Investment gain or loss recognized under equity method	Adjustment in other comprehensive income	Other changes in equity	Cash dividends declared and profits to be distributed	Impairment loss	Others		
Development Co., Ltd.												
Weihai Wanfeng Aowei Steam Turbine Co., Ltd.	42,331,472.75	263,391,538.22			-8,205,181.02				17,500,000.00			237,686,357.20
Taiyuan Medium color twelve metallurgy real estate Development Co., Ltd.	74,532,365.65	94,730,717.03			-2,035,853.79							92,694,863.24
Guizhou Aluminum Aluminum Co., Ltd.	91,457,480.00	91,628,471.78			2,000,000.00							93,628,471.78
Peking University Medical Zibo Hospital Co., Ltd.	94,474,515.20	91,265,631.17			-34,585,076.67							56,680,554.50
Jiexiu Yuye Coal Preparation Co., Ltd.	37,430,000.00	35,971,526.65										35,971,526.65
Luoyang Longji Copper Technology Co., Ltd.	17,860,000.00	17,860,000.00										17,860,000.00
Sinopharm Zhongzhou (Xinxiang) Hospital Management Co., Ltd.	15,612,251.35	16,257,961.86			-259,365.26							15,998,596.60
Chinalco Guizhou Industrial Service Co., Ltd.	91,210,903.75	11,975,517.63			-11,975,517.63							
Shanxi Ganlin Jin Aluminum Medical Investment Co., Ltd.	10,885,000.00	8,836,758.33										8,836,758.33
Henan Huashun Tiancheng Technology Co., Ltd.	1,559,000.00	7,843,251.29			-51,226.80							7,792,024.49

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Investee	Cost of investments	Opening balance	Increase/ decrease in current year								Closing balance	Closing balance of impairment loss	
			Additional investments	Decrease in investments	Investment gain or loss recognized under equity method	Adjustment in other comprehensive income	Other changes in equity	Cash dividends declared and profits to be distributed	Impairment loss	Others			
Qingdao mountain aluminum cement Co., Ltd.	7,604,797.44	7,604,797.44									-7,604,797.44		
Zhengzhou Great Wall Aluminum Carbon Co., Ltd.	3,136,650.00	6,441,095.32		6,441,095.32	616,367.18				616,367.18				
Qinghai Aluminum Metal Solvent Co., Ltd.	5,196,284.46	5,196,284.46										5,196,284.46	
Suzhou Zhongse Zhongyan Power Technology Co., Ltd.	5,020,000.00	4,607,574.42										4,607,574.42	4,607,574.42
Zibo mountain Aluminum cement Co., Ltd.	4,318,690.48	4,318,690.48										4,318,690.48	4,318,690.48
Qinghai Chalco Industrial Service Co., Ltd.	1,900,000.00	3,408,844.59							78,171.97			3,330,672.62	
Henan Great Wall Logistics Co., Ltd.	800,000.00	2,650,000.00										2,650,000.00	
Hangzhou Huannuan Technology Co., Ltd.	4,900,000.00	2,356,973.50			-71,203.86							2,285,769.64	
Shandong Shanal Zhongke Environmental Protection Technology Co., Ltd.	1,750,000.00	1,404,467.39			380,801.60						-1,785,268.99		
Henan Jinnui Aijie Building Materials Co., Ltd.	800,000.00	1,252,068.07			54,191.76			-220.96				1,306,038.87	
Qinghai Haiyuan Aluminum Industry Co., Ltd.	1,200,000.00	1,248,000.00			72,000.00				72,000.00			1,248,000.00	
Shanxi Gallium Huatianhe Electronic	3,852,955.00	182,943.61										182,943.61	182,943.61



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Investee	Cost of investments	Opening balance	Increase/ decrease in current year								Closing balance	Closing balance of Impairment loss
			Additional investments	Decrease in investments	Investment gain or loss recognized under equity method	Adjustment in other comprehensive income	Other changes in equity	Cash dividends declared and profits to be distributed	Impairment loss	Others		
Materials Co., Ltd.												
Beijing Jiia Semiconductor Materials Co., Ltd.	10,276,942.23				14,981,851.95						14,981,851.95	
ABC Huilui Fund Management Co., Ltd.	515,650,605.00	485,808,676.18			96,710,546.43				30,000,000.00		552,519,222.61	
Tianjin Junxin Lightweight Technology Co., Ltd.	6,007,687.49	6,407,687.49			401,000.00						6,808,687.49	
SimferJerseyLimited	13,517,883,489.44	12,604,180,401.38	1,591,364,645.38		-1,707,774.42						14,193,837,272.34	
SimferJerseyFinance2Ltd.	1,950,462,149.04	1,866,654,826.11		1,866,654,826.11								
Ningbo Zhealuminum Junrong Venture Capital Investment Partnership (limited partnership)	210,000,000.00		210,000,000.00		71,370,173.59						281,370,173.59	
Zhejiang Aluminum Cheng Intelligent Equipment Co., Ltd.	22,500,000.00	22,510,211.16			-1,720,504.45						20,789,706.71	
Shenzhen Kaitou Aluminum Cheng Lightweight Intelligent Technology Co., Ltd.	4,600,000.00	4,592,632.17	473,500.00								5,066,132.17	
Xingal New Energy Technology (Xuzhou) Co., Ltd.	400,000.00	400,000.00									400,000.00	
Chongqing Star Real Estate Development	5,791,800.00	1,066,800.00		1,066,800.00	90,588.12						-90,588.12	

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Investee	Cost of investments	Opening balance	Increase/ decrease in current year								Closing balance	Closing balance of impairment loss
			Additional investments	Decrease in investments	Investment gain or loss recognized under equity method	Adjustment in other comprehensive income	Other changes in equity	Cash dividends declared and profits to be distributed	Impairment loss	Others		
Co., Ltd.												
Longxi Northwest aluminum bridge Welding Material Co., Ltd.	4,000,000.00	1,452,238.72		1,452,238.72								
Fuzhou Jiaotou Ruimin Trading Co., Ltd.	600,000.00	1,055,004.84			1,171,465.17				60,000.00			2,166,470.01
Zhuzhou Tianqiao Lifting Stock Co., Ltd.	173,530,660.50	174,004,652.51			275,141.16				1,077,338.66			173,202,455.01
Guangdong Qiaoluminum Innovation Equity Investment Partnership (Limited partnership)	99,000,000.00	98,384,105.91		99,939,355.29							1,555,249.38	
Chalco Southern Aluminum (Fujian) Aluminum Structure Technology Development Co., Ltd.	50,000,000.00	55,424,710.81			1,248,740.34				2,210,000.00			54,463,451.15
Yunnan Ningyong Expressway Co., Ltd.	30,000,000.00	30,000,000.00										30,000,000.00
Yunnan Linyun Expressway Co., Ltd.	30,000,000.00	30,000,000.00	63,041.86		4,036.87							30,067,078.73
Luoyang Huazhong Aluminum Industry Co., Ltd.	28,200,000.00	27,844,436.04										27,844,436.04
Jiangsu Zhongse Ruili Industrial Co., Ltd.	25,015,000.00	12,001,815.11										12,001,815.11
Guizhou Tongye Construction and Development Co., Ltd.	13,500,000.00	20,542,397.23			-1,273,995.14							19,268,402.09

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Investee	Cost of investments	Opening balance	Increase/ decrease in current year								Closing balance	Closing balance of impairment loss
			Additional investments	Decrease in investments	Investment gain or loss recognized under equity method	Adjustment in other comprehensive income	Other changes in equity	Cash dividends declared and profits to be distributed	Impairment loss	Others		
China Construction Aluminum New Materials Henan Co., Ltd.	9,500,000.00	11,357,381.37		10,625,723.40							-731,657.97	
Shaanxi AVIC Construction and Installation Co., Ltd.	7,137,337.06	11,546,820.07			-4,791,549.32							6,755,270.75
Chalco See top Intelligent Technology Co., Ltd.	9,000,000.00	5,753,055.92			-2,097,854.58							3,655,201.34
Henan Qianhai Times Energy Conservation and Environmental Protection Technology Co., Ltd.	1,800,000.00	155,776.81			-115,433.09							40,343.72
Hunan Tianqiao Jiacheng Intelligent Technology Co., Ltd.	3,300,000.00	2,168,962.72	3,300,000.00		1,123,293.37							6,592,256.09
Loudi Haocuang Development and Construction Co., Ltd.	100,000,000.00	100,000,000.00										100,000,000.00
Mianxian Urban and rural Infrastructure Construction Co., Ltd.	1,500,000.00	1,487,776.51			-2,274.88							1,485,501.63
Qinghai Chalco Industrial Service Co., Ltd.	1,800,000.00	2,048,844.23			294,054.34				74,057.66			2,268,840.91
Sichuan South Sichuan Rail Transit Operation Co., Ltd.	28,000,000.00	29,292,344.68			1,456,182.27							30,748,526.95

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Investee	Cost of investments	Opening balance	Increase/ decrease in current year								Closing balance	Closing balance of Impairment loss
			Additional investments	Decrease in investments	Investment gain or loss recognized under equity method	Adjustment in other comprehensive income	Other changes in equity	Cash dividends declared and profits to be distributed	Impairment loss	Others		
Taikang Haowen Construction Co., Ltd.	108,640,000.00	108,640,000.00									108,640,000.00	
Tongchuan Zhaojin Executive Academy Construction operation Management Co., Ltd.	13,800,000.00	13,816,977.58			56,290.00						13,873,267.58	
Xi 'an Urban and Rural Construction Investment development Co., Ltd.	9,000,000.00	8,372,324.38									8,372,324.38	8,372,324.38
Yunnan Kunye Construction development Co., Ltd.	3,690,000.00	165,968.31									165,968.31	
Yunnan Linshuang Expressway Co., Ltd.	30,000,000.00	30,000,000.00			3,992.44						30,003,992.44	

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3. Main financial information of important joint ventures

Items	Current year		Prior year	
	Guangxi Huayin Aluminum Industry Co., Ltd.	Guangxi Hualei New Material Co., Ltd.	Guangxi Huayin Aluminum Industry Co., Ltd.	Guangxi Hualei New Material Co., Ltd.
Current assets	1,722,264,125.09	1,620,940,199.77	1,217,776,378.72	962,667,058.59
Non-current assets	5,024,443,703.04	4,839,735,051.10	5,361,591,558.80	4,929,514,946.89
Total assets	6,746,707,828.13	6,460,675,250.87	6,579,367,937.52	5,892,182,005.48
Current liabilities	1,844,884,032.03	1,512,805,914.33	1,522,699,524.08	1,422,515,381.83
Non-current liabilities	526,827,170.16	1,607,016,778.28	580,419,267.17	1,897,979,311.02
Total liabilities	2,371,711,202.19	3,119,822,692.61	2,103,118,791.25	3,320,494,692.85
Net assets	4,374,996,625.94	3,340,852,558.26	4,476,249,146.27	2,571,687,312.63
Net assets share of joint ventures according to shareholding rate	1,443,748,886.56	1,071,006,405.51	1,477,162,218.27	1,071,006,405.51
Adjustment events				
The book value of equity investments to joint ventures	1,443,748,886.56	1,071,006,405.51	1,477,162,218.27	1,071,006,405.51
The fair value of equity investment public price				
Operating income	5,126,993,559.00	7,722,705,862.26	4,631,737,359.69	5,413,399,328.52
Financial expenses	26,168,037.35	108,658,586.83	44,500,338.32	172,738,937.03
Income tax expenses	44,332,604.09	144,740,826.73	21,152,394.55	30,073,374.69
Net profit	202,114,270.00	890,473,755.22	174,037,075.97	155,274,259.73
Total comprehensive income	202,114,270.00	890,473,755.22	174,037,075.97	155,274,259.73
Dividends received from joint ventures in current year		75,405,376.00	99,000,000.00	75,405,400.00

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**4. Main financial information of important associates**

Items	Current year			Prior year		
	Huadian Ningxia Lingwu Power Generation Co., Ltd.	Qinghai Energy Development (Group) Co., Ltd.	Chambixi Copper Smelting Co., Ltd.	Huadian Ningxia Lingwu Power Generation Co., Ltd.	Qinghai Energy Development (Group) Co., Ltd.	Chambixi Copper Smelting Co., Ltd.
Current assets	1,042,180,001.44	2,226,405,837.92	5,970,191,880.57	851,905,958.08	3,622,241,563.24	4,574,364,019.71
Non-current assets	5,444,934,892.89	5,849,931,638.44	1,070,835,450.22	7,273,554,471.22	365,067,137.84	1,212,836,118.77
Total assets	6,487,114,894.33	8,076,337,476.36	7,041,027,330.79	8,125,460,429.30	3,987,308,701.08	5,787,200,138.48
Current liabilities	3,968,405,009.29	4,111,146,732.95	2,155,248,956.64	3,508,332,734.30	482,335,545.36	1,099,274,305.14
Non-current liabilities	2,524,600,818.04	932,881,480.46	588,091,315.69	946,763,017.98		635,622,792.77
Total liabilities	6,493,005,827.33	5,044,028,213.41	2,743,340,272.33	4,455,095,752.28	482,335,545.36	1,734,897,097.91
Net assets	-5,890,933.00	3,032,309,262.95	4,297,687,058.46	3,670,364,677.02	3,504,973,155.72	4,052,303,040.57
Net assets share of joint ventures according to shareholding rate		624,561,198.61	1,719,074,823.38	923,089,974.18	485,808,676.18	1,789,399,998.71
Adjustment events	489,379,118.24					
The book value of equity investments to joint ventures	489,379,118.24		1,719,074,823.38	923,089,974.18	485,808,676.18	1,789,399,998.71
The fair value of equity investment public price						
Operating income	4,589,613,728.89	2,715,954,011.34	10,797,071,748.89	4,114,682,376.88	1,020,527,392.02	7,895,693,001.29
Net profit	-833,749,118.32	37,589,994.29	689,321,852.93	162,219,910.23	356,791,139.86	496,727,367.68
Total comprehensive income	-833,749,118.32	37,589,994.29	689,321,852.93	162,219,910.23	356,791,139.86	496,727,367.68
Dividends received from associated enterprises in current year	191,393,853.06			390,857,233.04		220,409,600.00

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**8.16 Other equity instruments**

Items	Closing balance	Opening balance
Invested by Company	4,338,223,762.39	5,199,438,029.46
Invested by aluminum Corporation of China, a subsidiary of the company	239,537,627.40	1,197,469,385.81
The company's subsidiary China Copper Industry Co., LTD	6,706,120,177.04	5,744,195,885.09
The company's subsidiary Chinalco overseas Holdings Limited investment	88,764,437,057.16	87,531,934,259.75
Investment by other subsidiaries of the company	870,078,958.37	964,955,671.25
<b>Total</b>	<b>100,918,397,582.36</b>	<b>100,637,993,231.36</b>

**8.17 Other non-current financial assets**

Items	Fair value at year end	Fair value at year beginning
Huatai insurance	29,181,865.24	27,609,444.54
Subordinated interests receivable of 2019 China Securities- Chinalco International Asset Support Special Plan	18,900,000.00	18,900,000.00
Sichuan Liwu Copper Industry Co., Ltd.		18,171,500.00
Kunming Tangdan Metallurgical Co., Ltd.		4,500,000.00
Kunming Yinmin Metallurgical Co., Ltd.		4,500,000.00
Kunming Lanniping Metallurgical Co., Ltd.		4,500,000.00
Guiyan Catalytic Equity Investment	2,400,000.00	2,400,000.00
China Guangfa Bank Co., Ltd	1,287,459.00	1,287,459.00
Shanghai Gold Exchange (Membership fees)	500,000.00	500,000.00
Shanghai Futures Exchange (Membership fees)	100,000.00	100,000.00
<b>Total</b>	<b>52,369,324.24</b>	<b>82,468,403.54</b>

**8.18 Investment properties**

1. Investment property measured at cost

Items	Opening balance	Increase in current year	Decrease in current year	Closing balance
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Items	Opening balance	Increase in current year	Decrease in current year	Closing balance
<b>Total original carrying amount</b>	<b>5,257,297,664.64</b>	<b>438,012,938.30</b>	<b>117,927,017.30</b>	<b>5,577,383,585.64</b>
Buildings	3,979,154,972.53	372,549,364.87	94,613,318.60	4,257,091,018.80
Land use rights	1,278,142,692.11	65,463,573.43	23,313,698.70	1,320,292,566.84
<b>Total accumulated depreciation (amortization)</b>	<b>1,250,031,436.96</b>	<b>82,656,876.77</b>	<b>27,382,032.14</b>	<b>1,305,306,281.59</b>
Buildings	1,219,819,398.96	29,127,129.73	18,736,475.51	1,230,210,053.18
Land use rights	30,212,038.00	53,529,747.04	8,645,556.63	75,096,228.41
<b>Total carrying amount before impairment</b>	<b>4,007,266,227.68</b>			<b>4,272,077,304.05</b>
Buildings	2,759,335,573.57			3,026,880,965.62
Land use rights	1,247,930,654.11			1,245,196,338.43
<b>Total amount of provision for impairment loss</b>	<b>99,101,735.46</b>	<b>45,531,148.07</b>	<b>411,140.00</b>	<b>144,221,743.53</b>
Buildings	99,015,112.24	45,531,148.07	411,140.00	144,135,120.31
Land use rights	86,623.22			86,623.22
<b>Total carrying amount</b>	<b>3,908,164,492.22</b>			<b>4,127,855,560.52</b>
Buildings	2,660,320,461.33			2,882,745,845.31
Land use rights	1,247,844,030.89			1,245,109,715.21

**8.19 Fixed Assets**

Items	Carrying amount at year end	Carrying amount at year beginning
Fixed assets	188,270,437,456.35	201,090,984,922.41
Disposal of fixed assets	3,686,028,617.29	4,080,261,636.08
<b>Total</b>	<b>191,956,466,073.64</b>	<b>205,171,246,558.49</b>

1. Fixed assets situation

Items	Opening balance	Increase in current year	Decrease in current year	Closing balance
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Items	Opening balance	Increase in current year	Decrease in current year	Closing balance
<b>Total original carrying amount</b>	<b>349,947,161,293.87</b>	<b>15,713,720,997.43</b>	<b>16,826,961,757.00</b>	<b>348,833,920,534.30</b>
Including: Land	6,640,232.90			6,640,232.90
Buildings	135,093,144,806.00	5,955,256,893.79	5,005,629,347.48	136,042,772,352.31
Machinery and Equipment	203,045,882,289.27	8,258,396,863.91	9,834,325,863.85	201,469,953,289.33
Transportation vehicles	4,644,860,286.45	174,302,167.39	505,204,450.47	4,313,958,003.37
Electronic equipment	1,023,656,300.10	194,950,387.32	192,889,917.94	1,025,716,769.48
Office equipment	2,346,558,206.95	183,959,972.38	265,574,345.59	2,264,943,833.74
Hotel furniture	7,056,627.95	981,356.00	117,131.92	7,920,852.03
Others	3,779,362,544.25	945,873,356.64	1,023,220,699.75	3,702,015,201.14
<b>Total accumulated depreciation</b>	<b>132,047,657,624.06</b>	<b>17,459,129,703.65</b>	<b>6,151,978,743.46</b>	<b>143,354,808,584.25</b>
Including: Land				
Buildings	37,302,955,199.89	4,770,902,157.65	1,799,034,466.35	40,274,822,891.19
Machinery and Equipment	87,523,918,092.91	11,714,023,620.47	3,695,400,874.39	95,542,540,838.99
Transportation vehicles	2,990,116,696.97	231,552,836.44	278,082,193.64	2,943,587,339.77
Electronic equipment	878,107,164.10	156,223,577.53	126,710,523.57	907,620,218.06
Office equipment	1,302,995,090.43	107,713,620.16	48,279,709.42	1,362,429,001.17
Hotel furniture	3,944,583.84	1,102,918.44		5,047,502.28
Others	2,045,620,795.92	477,610,972.96	204,470,976.09	2,318,760,792.79
<b>Total net book value of fixed assets</b>	<b>217,899,503,669.81</b>			<b>205,479,111,950.05</b>
Including: Land	6,640,232.90			6,640,232.90
Buildings	97,790,189,606.11			95,767,949,461.12
Machinery and Equipment	115,521,964,196.36			105,927,412,450.34

**ALUMINUM CORPORATION OF CHINA (Consolidated) Notes to the financial statements for the year of 2021**

1 January 2021 to 31 December 2021

(Unless otherwise specified, the notes to the financial statements are all presented in RMB)

Items	Opening balance	Increase in current year	Decrease in current year	Closing balance
Transportation vehicles	1,654,743,589.48			1,370,370,663.60
Electronic equipment	145,549,136.00			118,096,551.42
Office equipment	1,043,563,116.52			902,514,832.57
Hotel furniture	3,112,044.11			2,873,349.75
Others	1,733,741,748.33			1,383,254,408.35
<b>Total provision for impairment losses</b>	<b>16,808,518,747.40</b>	<b>4,744,476,508.39</b>	<b>4,344,320,762.09</b>	<b>17,208,674,493.70</b>
Including: Land				
Buildings	6,289,574,044.16	2,520,888,461.75	1,508,378,405.38	7,302,084,100.53
Machinery and Equipment	10,404,965,958.22	2,214,714,607.18	2,819,987,707.25	9,799,692,858.15
Transportation vehicles	22,411,140.97	4,221,039.01	5,886,581.70	20,745,598.28
Electronic equipment	49,282,273.19	1,907,571.09	9,794,327.37	41,395,516.91
Office equipment	18,623,377.97	89,924.00	35,997.33	18,677,304.64
Hotel furniture				
Others	23,661,952.89	2,654,905.36	237,743.06	26,079,115.19
<b>Total carrying amount of fixed assets</b>	<b>201,090,984,922.41</b>			<b>188,270,437,456.35</b>
Including: Land	6,640,232.90			6,640,232.90
Buildings	91,500,615,561.95			88,465,865,360.59
Machinery and Equipment	105,116,998,238.14			96,127,719,592.19
Transportation vehicles	1,632,332,448.51			1,349,625,065.32
Electronic equipment	96,266,862.81			76,701,034.51
Office equipment	1,024,939,738.55			883,837,527.93

**ALUMINUM CORPORATION OF CHINA (Consolidated) Notes to the financial statements for the year of 2021**

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(Unless otherwise specified, the notes to the financial statements are all presented in RMB)

Items	Opening balance	Increase in current year	Decrease in current year	Closing balance
Hotel furniture	3,112,044.11			2,873,349.75
Others	1,710,079,795.44			1,357,175,293.16

2. Temporarily idle fixed assets

Items	Original carrying amount	Accumulated depreciation	Provision for impairment loss	Carrying amount	Notes
Buildings	1,483,294,832.86	444,664,844.80	264,667,643.03	773,962,345.03	
Machinery and Equipment	877,853,785.83	399,281,892.94	330,448,783.74	148,123,109.15	
Transportation vehicles	14,068,980.50	11,886,638.90	623,125.35	1,559,216.25	
Electronic equipment	762,695.20	593,161.84		169,533.36	
Office equipment	24,046,028.44	11,592,104.55	6,974,136.68	5,479,787.21	
Others					
<b>Total</b>	<b>2,400,026,322.83</b>	<b>868,018,643.03</b>	<b>602,713,688.80</b>	<b>929,293,991.00</b>	

3. Disposal of Fixed Assets

Items	Carrying amount at year end	Carrying amount at year beginning	Reasons for transferring to disposal of fixed assets
Machinery and Equipment	3,673,869,538.28	3,281,739,459.97	Intend to dispose
Buildings	7,868,373.31	773,914,264.92	Intend to dispose
Transportation vehicles	3,515,423.82	21,129,144.66	Intend to dispose
Office equipment	775,281.88	2,477,327.96	Intend to dispose
Others		1,001,438.57	Intend to dispose
<b>Total</b>	<b>3,686,028,617.29</b>	<b>4,080,261,636.08</b>	

**ALUMINUM CORPORATION OF CHINA (Consolidated) Notes to the financial statements for the year of 2021**

1 January 2021 to 31 December 2021

(Unless otherwise specified, the notes to the financial statements are all presented in RMB)

**8.20 Construction in progress**

Items	Closing balance			Opening balance		
	Gross carrying amount	Provision for Impairment loss	Carrying amount	Gross carrying amount	Provision for Impairment loss	Carrying amount
Tromoc Copper project	5,632,734,308.11	644,915,163.44	4,987,819,144.67	5,316,960,573.68	345,667,152.34	4,971,293,421.34
Ludian 6.5-magnitude earthquake recovery and reconstruction hydropower and aluminum project	1,521,667,659.34		1,521,667,659.34	921,755,789.70		921,755,789.70
Molybdenum, lead and zinc polymetallic ore development project at the junction of Songling District, Greater Hinggan Mountains	1,241,526,544.02		1,241,526,544.02	1,231,912,537.45		1,231,912,537.45
Second phase engineering project of Academy of Sciences	958,017,718.46		958,017,718.46	727,583,287.97		727,583,287.97
Lao Mu Jing Tailing Pond project	411,851,894.47		411,851,894.47	133,302,902.00		133,302,902.00
Lancang lead ore prospecting project	380,534,516.08		380,534,516.08	374,711,017.14		374,711,017.14
Nimu Copper polymetallic project	371,354,298.55	371,354,298.55		370,299,874.30		370,299,874.30
Transportation aluminum profile project with annual output of 150,000 tons	363,795,859.35	297,649,289.56	66,146,569.79	364,072,558.39	297,649,289.56	66,423,268.83
Rongda Lead-zinc-silver Mine deep resources replacement technical transformation project	317,978,996.74		317,978,996.74	268,636,477.18		268,636,477.18
Tongchanggou polymetallic mine detailed inspection project	312,771,005.05	312,771,005.05		312,771,005.05	312,771,005.05	
Carbon New materials Project	271,180,779.96	147,846,433.20	123,334,346.76	222,759,072.48	112,500,000.00	110,259,072.48
35,000 tons of battery foil project	243,854,823.53		243,854,823.53	193,073,086.26		193,073,086.26
Chifeng Yuntong Environmental protection upgrade, relocation and	240,045,504.95		240,045,504.95	359,312,584.01		359,312,584.01

**ALUMINUM CORPORATION OF CHINA (Consolidated) Notes to the financial statements for the year of 2021**

1 January 2021 to 31 December 2021

(Unless otherwise specified, the notes to the financial statements are all presented in RMB)

Items	Closing balance			Opening balance		
	Gross carrying amount	Provision for Impairment loss	Carrying amount	Gross carrying amount	Provision for Impairment loss	Carrying amount
transformation project						
Qinghai Maduo Kangdelongshejin Polymetallic mine survey project	233,612,293.00		233,612,293.00	220,984,904.06		220,984,904.06
Honghe-wenshan high pressure gas transmission pipeline project	224,513,194.16		224,513,194.16	196,494,995.88		196,494,995.88
Yiliang Chihong Safety measures Project	224,352,624.21		224,352,624.21	366,594,142.17		366,594,142.17
Industrialization construction project	196,292,240.42		196,292,240.42	275,443,704.89		275,443,704.89
Tayuan No. 2 Branch Lead-zinc copper project	182,836,044.45	157,728,031.87	25,108,012.58	182,836,044.45		182,836,044.45
Yiliang Chihong Resources continue to succeed the project	175,837,226.49		175,837,226.49	159,794,929.86		159,794,929.86
Lu Xi Si aluminum alloy new technology promotion demonstration project	173,615,936.92	12,041,714.08	161,574,222.84	173,944,898.27	12,041,714.08	161,903,184.19
Tigronnan project	172,655,949.34		172,655,949.34	134,441,517.30		134,441,517.30
Environmental protection transformation and storage and transportation optimization project of fully enclosed mine	160,639,722.06		160,639,722.06	91,434,251.73		91,434,251.73
Prospecting project in Huize production area	136,397,686.64		136,397,686.64	244,700,036.33		244,700,036.33
Moon Bay Health and Fitness Program	131,207,116.60		131,207,116.60	300,351,320.88		300,351,320.88
Silver Star Well one project	129,882,105.98		129,882,105.98	24,567,948.08		24,567,948.08
Supporting project of 2800MM six-high irreversible all-oil lubricated cold rolling mill in calendaring plant	120,094,320.12		120,094,320.12	103,227,381.01		103,227,381.01

**ALUMINUM CORPORATION OF CHINA (Consolidated) Notes to the financial statements for the year of 2021**

1 January 2021 to 31 December 2021

(Unless otherwise specified, the notes to the financial statements are all presented in RMB)

Items	Closing balance			Opening balance		
	Gross carrying amount	Provision for Impairment loss	Carrying amount	Gross carrying amount	Provision for Impairment loss	Carrying amount
Nuodong Rare earth Ore Exploration right acquisition project, Cenxi, Guangxi	110,559,517.93		110,559,517.93	473,209.99		473,209.99
70KT /a oil fracturing proppant project production line technical renovation and expansion project	101,136,456.60	94,345,639.08	6,790,817.52	100,918,981.23	90,827,083.11	10,091,898.12
Yiliang Chihong prospecting project	98,142,017.62		98,142,017.62	150,413,315.72		150,413,315.72
Production increase equipment construction project of thick plate production line	93,578,709.67		93,578,709.67	88,064,240.85		88,064,240.85
138,000 tons of annual anode carbon project	85,401,442.97	61,781,102.01	23,620,340.96	85,346,987.52	61,781,102.01	23,565,885.51
Office r&d system project	83,206,541.35		83,206,541.35	47,659,973.20		47,659,973.20
High precision electronic copper plate with controllable atmosphere continuous heat treatment furnace project	80,645,787.96	80,261,037.95	384,750.01	80,645,787.96	80,261,037.95	384,750.01
Naro Copper project	80,099,626.65		80,099,626.65	80,099,626.65		80,099,626.65
Green low-carbon Hydropower aluminum Processing Integration Heqing Project (Phase II)	76,845,480.74		76,845,480.74	123,512,154.40		123,512,154.40
Aviation sheet and automobile plate production equipment construction project	75,124,379.30		75,124,379.30	79,906,009.34		79,906,009.34
Independent capacity building project	69,515,325.84		69,515,325.84	24,951,561.22		24,951,561.22
Relocation of 450mm qingbai copper production line of Shangtong	55,544,491.91		55,544,491.91	55,662,638.80		55,662,638.80
Green low-carbon Hydropower aluminum Processing Integration Heqing	55,217,247.72		55,217,247.72	1,301,548.54		1,301,548.54

**ALUMINUM CORPORATION OF CHINA (Consolidated) Notes to the financial statements for the year of 2021**

1 January 2021 to 31 December 2021

(Unless otherwise specified, the notes to the financial statements are all presented in RMB)

Items	Closing balance			Opening balance		
	Gross carrying amount	Provision for Impairment loss	Carrying amount	Gross carrying amount	Provision for Impairment loss	Carrying amount
Project (Phase I)						
Crooked mountain mining, washing and selection project	53,754,635.09		53,754,635.09	13,329,662.12		13,329,662.12
Non-combustible thermal insulation material project	50,833,412.04	50,833,412.04		50,833,412.04	50,833,412.04	
Production and development project of Lancang Lead-zinc Mine	49,732,990.07		49,732,990.07	49,732,990.07		49,732,990.07
Aluminum lithium alloy material independent capacity construction project	47,681,511.48		47,681,511.48	36,284,078.60		36,284,078.60
Dalulong Copper polymetallic ore exploration right project in Xinping County, Yunnan Province	46,909,880.95	46,909,880.95		46,909,880.95	46,909,880.95	
High-end aluminum alloy functional materials intelligent manufacturing new mode project	46,614,721.88		46,614,721.88	37,944,810.70		37,944,810.70
Peripheral geological exploration of Pulang Copper and Gold Deposit in Shangri-La County, Yunnan Province	42,991,176.25		42,991,176.25	40,941,558.80		40,941,558.80
Xizang Xinhu Prospecting project	41,588,281.65	9,864,919.08	31,723,362.57	39,244,445.92	9,864,919.08	29,379,526.84
Risk exploration project of Linong ore section of Yangla Copper Mine	40,886,165.95		40,886,165.95	39,897,730.02		39,897,730.02
Mining and Beneficiation project of Hongnipo Copper Mine, Huili, Sichuan province	39,695,166.34		39,695,166.34	293,982,387.08		293,982,387.08
Pulang Copper Mine phase I mining and beneficiation project	39,631,284.43		39,631,284.43	19,422,258.86		19,422,258.86
Western dahongshan Copper Mine -20, 180 section	39,256,363.72		39,256,363.72	25,181,701.09		25,181,701.09

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1 January 2021 to 31 December 2021

(Unless otherwise specified, the notes to the financial statements are all presented in RMB)

Items	Closing balance			Opening balance		
	Gross carrying amount	Provision for Impairment loss	Carrying amount	Gross carrying amount	Provision for Impairment loss	Carrying amount
supplementary geological exploration project						
4# cold rolling technical transformation, comprehensive utilization of diatomite and other 63 technical transformation projects	31,832,044.37	4,437,800.00	27,394,244.37	49,267,490.32	4,437,800.00	44,829,690.32
Old line power supply system infrastructure technical renovation project	30,678,145.58		30,678,145.58	34,985,810.07		34,985,810.07
Transportation aluminum alloy material production line project	29,245,900.32		29,245,900.32			
Smart factory for high-end electronics and environmentally friendly packaging materials	26,189,022.88		26,189,022.88	61,292,983.09		61,292,983.09
Brine treatment project	25,743,805.02	15,228,237.61	10,515,567.41	25,743,805.02	15,228,237.61	10,515,567.41
Comac project	25,055,725.06		25,055,725.06			
Project of bunker Na Mu Gang	22,455,704.69	3,823,107.57	18,632,597.12	22,455,704.69	3,823,107.57	18,632,597.12
Deep risk exploration in Linong ore section of Yangla Copper Mine	22,393,375.08		22,393,375.08	26,206,400.43		26,206,400.43
Yangla Copper Mine 31# south continuous replacement system engineering	22,109,755.46		22,109,755.46	16,669,588.82		16,669,588.82
150,000 tons carbon anode project	21,056,834.93	21,056,834.93		21,056,834.93	21,056,834.93	
Aluminum alloy new material new product development project	20,932,966.76		20,932,966.76	15,606,625.21		15,606,625.21
Mine facilities renovation project	20,373,647.22		20,373,647.22	20,373,647.22		20,373,647.22
Qinghai Hongxin Niupan Mining Area mining and	20,056,568.21		20,056,568.21	49,277,621.38		49,277,621.38



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1 January 2021 to 31 December 2021

(Unless otherwise specified, the notes to the financial statements are all presented in RMB)

Items	Closing balance			Opening balance		
	Gross carrying amount	Provision for Impairment loss	Carrying amount	Gross carrying amount	Provision for Impairment loss	Carrying amount
Selection Project (Phase II) early stage of the project						
500,000 tons hydropower aluminum project	19,985,450.96		19,985,450.96	30,597,068.24		30,597,068.24
Oriental Garden Hotel Project	19,926,500.00		19,926,500.00	19,926,500.00		19,926,500.00
Upgrade project of leachate disposal system of red mud yard	19,387,394.32		19,387,394.32	15,986,419.53		15,986,419.53
Dexin Polymetallic mine, Xetongmen County, Xigaze, Xizang province	16,817,360.62		16,817,360.62	16,791,610.62		16,791,610.62
Fangchenggang 2 million tons alumina project	16,797,914.58		16,797,914.58	497,972,630.91		497,972,630.91
2# Production line clinker firing system energy saving and emission reduction transformation project	16,122,030.84		16,122,030.84			
System engineering above 3150 level of Yangla Copper Mine	15,789,684.85		15,789,684.85	3,992,525.97		3,992,525.97
Zhaotong lead and zinc smelting project	15,580,501.94	15,580,501.94		15,580,501.94	15,580,501.94	
Middle and high-end aluminum alloy project with annual output of 150,000 tons	15,080,161.56		15,080,161.56	12,482,662.19		12,482,662.19
Rare earth supporting plant construction project of Weishan Steel Research Institute	14,805,231.77		14,805,231.77			
Copper smelting ring set flue gas comprehensive recovery and utilization project	14,499,256.87		14,499,256.87	11,896,852.98		11,896,852.98
Weishan Lake Mine safety and environmental protection technology renovation project	13,656,311.59		13,656,311.59			
Continuous replacement	13,413,180.78		13,413,180.78	2,700,468.91		2,700,468.91

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(Unless otherwise specified, the notes to the financial statements are all presented in RMB)

Items	Closing balance			Opening balance		
	Gross carrying amount	Provision for Impairment loss	Carrying amount	Gross carrying amount	Provision for Impairment loss	Carrying amount
system engineering below 3150 level of Yangla Copper Mine						
Mining project of deep section of Luodang Mining Area	12,279,209.91		12,279,209.91	354,854,970.32		354,854,970.32
Aluminum alloy production process digitization and intelligent project	12,273,940.94		12,273,940.94	40,380,517.97		40,380,517.97
Living area infrastructure project	12,077,698.23		12,077,698.23	14,809,115.96		14,809,115.96
A new thick plate multi - roll straightener	11,279,587.38		11,279,587.38	1,952,991.59		1,952,991.59
Hot rolling civil engineering and pile foundation engineering project of Luoyang Aluminum Processing Plant	10,532,267.98	10,532,267.98		10,532,267.98	10,532,267.98	
Aluminum ash resource utilization environmental protection technology demonstration project	10,371,270.60		10,371,270.60			
Special material project	9,039,908.98		9,039,908.98	21,460,958.04		21,460,958.04
Guinea Port Project	4,999,069.64		4,999,069.64	127,171,042.15		127,171,042.15
GY project				193,699,827.74		193,699,827.74
Railway siding and coal transport system				91,595,012.63		91,595,012.63
High surface aluminum alloy strip transverse shearing line upgrade project				39,684,893.83		39,684,893.83
Aluminum alloy sheet and strip production line project for lightweight automobile				27,488,755.52		27,488,755.52
Construction project of rare earth Ore with annual output of 1000 tons (REO) in southern section of Huashan				18,863,483.90		18,863,483.90

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(Unless otherwise specified, the notes to the financial statements are all presented in RMB)

Items	Closing balance			Opening balance		
	Gross carrying amount	Provision for Impairment loss	Carrying amount	Gross carrying amount	Provision for Impairment loss	Carrying amount
Rare Earth Mining Area, Zhongshan-Fuchuan, Guangxi						
Titanium and nickel processing Materials Project Phase II				13,229,495.76		13,229,495.76
Research and development project of high strength and high conductivity copper alloy lead frame material for vISI				10,305,471.50		10,305,471.50
Huashan mining rights Project				10,089,762.81		10,089,762.81
Others	2,302,399,233.21	314,741,348.25	1,987,657,884.96	3,244,842,526.61	418,238,396.30	2,826,604,130.31
Engineering materials	226,355,084.01	693,175.43	225,661,908.58	169,173,469.87	20,663.49	169,152,806.38
<b>Total</b>	<b>19,275,434,732.25</b>	<b>2,674,395,200.57</b>	<b>16,601,039,531.68</b>	<b>20,245,626,108.84</b>	<b>1,910,024,405.99</b>	<b>18,335,601,702.85</b>

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(Unless otherwise specified, the notes to the financial statements are all presented in RMB)

1. Changes of significant construction in progress in current year

Project name	Budget	Opening balance	Increase in current year	Amount transferred to fixed assets in current year	Other decrease in current year	Closing balance	Amount injected as a proportion of budget amount (%)	Construction progress (%)	Amount of accumulated capitalized interests	Including: Capitalized interests in current year	Interest capitalization rate for current year (%)	Sources of funds
Tromoc Copper project	40,282,500,045.10	5,316,960,573.68	1,509,945,337.93	802,361,329.50	391,810,274.00	5,632,734,308.11	99.35	99.35	2,710,125,035.59			Self-funded/ loan
Ludian 6.5-magnitude earthquake recovery and reconstruction hydropower and aluminum project	5,752,750,000.00	921,755,789.70	633,010,224.44	33,098,354.80		1,521,667,659.34	98.84	98.84	59,632,787.52			Self-funded/ loan
Molybdenum, lead and zinc polymetallic ore development project at the junction of Songling District, Greater Hinggan Mountains	7,485,090,000.00	1,231,912,537.45	9,614,006.57			1,241,526,544.02	16.46	18.00	7,923,159.48	1,510,012.27	4.75	Self-funded/ loan
Second phase engineering project of Academy of Sciences	1,469,434,100.00	727,583,287.97	230,434,430.49			958,017,718.46	65.20	65.20	84,091,102.02	38,648,788.01	3.90	Self-funded/ loan
Lao Mu Jing Tailing Pond project	924,237,000.00	133,302,902.00	278,548,992.47			411,851,894.47	55.56	95.00				Self-funded
Lancang lead ore prospecting project	784,425,000.00	374,711,017.14	5,851,525.40		28,026.46	380,534,516.08	55.34	51.00	3,619,857.58			Self-funded/ loan

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Project name	Budget	Opening balance	Increase in current year	Amount transferred to fixed assets in current year	Other decrease in current year	Closing balance	Amount injected as a proportion of budget amount (%)	Construction progress (%)	Amount of accumulated capitalized interests	Including: Capitalized interests in current year	Interest capitalization rate for current year (%)	Sources of funds
Nimu Copper polymetallic project	500,000,000.00	370,299,874.30	1,054,424.25			371,354,298.55	74.27	74.27				Self-funded
Transportation aluminum profile project with annual output of 150,000 tons	3,042,370,000.00	364,072,558.39			276,699.04	363,795,859.35	12.00	12.00	11,078,846.33			Self-funded
Rongda Lead-zinc-silver Mine deep resources replacement technical transformation project	487,059,600.00	268,636,477.18	50,230,050.88	883,220.98	4,310.34	317,978,996.74	55.29	75.00				Loan and government grant
Carbon New materials Project	278,980,000.00	222,759,072.48	48,421,707.48			271,180,779.96	97.20	97.20				Self-funded/loan
35,000 tons of battery foil project	497,100,000.00	193,073,086.26	50,781,737.27			243,854,823.53	67.56	85.00	12,874,492.44			Self-funded/loan
Chifeng Yuntong Environmental protection upgrade, relocation and transformation project	5,610,980,000.00	359,312,584.01	97,256,897.91	212,123,014.41	4,400,962.56	240,045,504.95	100.00	100.00	63,559,261.64	729,925.53	0.16	Self-funded
Qinghai Maduo Kangdelongshejin Polymetallic mine	451,542,800.00	220,984,904.06	12,627,388.94			233,612,293.00	69.65	69.65	97,410,867.53	12,292,191.30	5.35	Loan and government

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Project name	Budget	Opening balance	Increase in current year	Amount transferred to fixed assets in current year	Other decrease in current year	Closing balance	Amount injected as a proportion of budget amount (%)	Construction progress (%)	Amount of accumulated capitalized interests	Including: Capitalized interests in current year	Interest capitalization rate for current year (%)	Sources of funds
survey project												grant
Honghe-wenshan high pressure gas transmission pipeline project	336,873,300.00	196,494,995.88	28,018,198.28			224,513,194.16	71.86	99.00				Self-funded/
Yiliang Chihong Safety measures Project	693,398,500.00	366,594,142.17	78,930,255.88	138,441,575.97	82,730,197.87	224,352,624.21	57.58	68.00				Self-funded
<b>Total</b>	<b>68,596,740,345.10</b>	<b>11,268,453,802.67</b>	<b>3,034,725,178.19</b>	<b>1,186,907,495.66</b>	<b>479,250,470.27</b>	<b>12,637,021,014.93</b>			<b>3,050,315,410.13</b>	<b>53,180,917.11</b>		

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2. Impairment loss of construction in progress recognized in current year

Items	Amount recognized in current year	Basis for recognition
Nimu Copper polymetallic project	371,354,298.55	Project is moving slowly
Tromoc Copper project	333,146,904.99	Project is moving slowly
Tayuan No. 2 Branch Lead-zinc copper project	157,728,031.87	Project is moving slowly
Fly ash annual output of 200,000 tons of alumina industrialization demonstration project	157,158,121.65	Project is moving slowly
20KT /a New carbon material project	35,346,433.20	Project is moving slowly
Henan Aluminum equipment relocation project	7,087,319.25	Project is moving slowly
Incremental power distribution service pilot project	5,791,672.29	Project is moving slowly
Improve the technical upgrading and expansion project of production line of 70,000 tons/year oil fracturing proppant project	3,518,555.97	Project is moving slowly
Milling machine project	3,500,000.00	Project is moving slowly
Others	8,676,833.56	Project is moving slowly
<b>Total</b>	<b>1,083,308,171.33</b>	

**8.21 Right-of-use assets**

Items	Opening balance	Increase in current year	Decrease in current year	Closing balance
<b>Total original carrying amount</b>	<b>4,141,718,894.75</b>	<b>1,402,081,929.80</b>	<b>1,913,763,625.94</b>	<b>3,630,037,198.61</b>
Including: Land	202,968,640.94	777,237,149.46	329,084,235.57	651,121,554.83
Buildings	1,546,154,717.95	477,969,063.58	178,395,617.92	1,845,728,163.61
Machinery, transportation and office equipment	2,326,886,221.87	145,181,260.14	1,402,700,086.98	1,069,367,395.03
Others	65,709,313.99	1,694,456.62	3,583,685.47	63,820,085.14
<b>Total accumulated depreciation</b>	<b>814,662,322.60</b>	<b>477,152,579.03</b>	<b>415,472,802.57</b>	<b>876,342,099.06</b>
Including: Land	27,207,954.86	10,692,956.08		37,900,910.94
Buildings	156,438,452.10	241,270,249.80	15,279,870.08	382,428,831.82
Machinery, transportation and office equipment	612,242,039.14	205,621,813.99	398,454,217.08	419,409,636.05

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Items	Opening balance	Increase in current year	Decrease in current year	Closing balance
Others	18,773,876.50	19,567,559.16	1,738,715.41	36,602,720.25
<b>Total net book value of right-of-use assets</b>	<b>3,327,056,572.15</b>			<b>2,753,695,099.55</b>
Including: Land	175,760,686.08			613,220,643.89
Buildings	1,389,716,265.85			1,463,299,331.79
Machinery, transportation and office equipment	1,714,644,182.73			649,957,758.98
Others	46,935,437.49			27,217,364.89
<b>Total impairment loss</b>	<b>15,996,906.96</b>	<b>67,744,058.15</b>		<b>83,740,965.11</b>
Including: Land				
Buildings				
Machinery, transportation and office equipment	15,790,482.70	67,744,058.15		83,534,540.85
Others	206,424.26			206,424.26
<b>Total carrying amount of right-of-use assets</b>	<b>3,311,059,665.19</b>			<b>2,669,954,134.44</b>
Including: Land	175,760,686.08			613,220,643.89
Buildings	1,389,716,265.85			1,463,299,331.79
Machinery, transportation and office equipment	1,698,853,700.03			566,423,218.13
Others	46,729,013.23			27,010,940.63

**8.22 Intangible assets**

Items	Opening balance	Increase in current year	Decrease in current year	Closing balance
<b>Total original carrying amount</b>	<b>73,174,416,910.32</b>	<b>10,822,126,878.56</b>	<b>9,928,972,965.68</b>	<b>74,067,570,823.20</b>
Including: Software	2,571,557,398.74	71,198,323.27	95,455,600.42	2,547,300,121.59
Land use rights	23,304,570,306.58	373,085,283.49	337,691,823.05	23,339,963,767.02
Patents	503,026,769.64	29,274,617.76	28,683,893.56	503,617,493.84
Non-proprietary technology	385,855,920.01	44,245,158.78	200,513,752.07	229,587,326.72



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Items	Opening balance	Increase in current year	Decrease in current year	Closing balance
Trademarks	3,450,387.41			3,450,387.41
Copyrights	14,921,768.49	2,106,791.93		17,028,560.42
Concession	1,547,441,151.31	649,275,871.38		2,196,717,022.69
Exploration right	15,487,670,929.40	32,389,940.19	8,645,027,473.82	6,875,033,395.77
Mining right	29,214,062,499.30	9,586,364,140.90	561,795,222.76	38,238,631,417.44
Others	141,859,779.44	34,186,750.86	59,805,200.00	116,241,330.30
<b>Total accumulated amortization</b>	<b>14,509,773,439.22</b>	<b>4,700,024,841.20</b>	<b>2,680,822,608.39</b>	<b>16,528,975,672.03</b>
Including: Software	862,386,989.02	99,626,922.10	45,422,043.03	916,591,868.09
Land use rights	4,655,115,987.02	654,828,495.29	57,831,958.70	5,252,112,523.61
Patents	350,176,461.32	24,916,872.97	22,574,770.95	352,518,563.34
Non-proprietary technology	234,828,074.19	27,514,051.77	72,498,792.04	189,843,333.92
Trademarks	3,371,936.10	6,229.64		3,378,165.74
Copyrights	3,169,784.02	1,040,737.70		4,210,521.72
Concession	60,388,447.29	56,034,806.55		116,423,253.84
Exploration right	2,350,005,544.32		2,342,153,902.42	7,851,641.90
Mining right	5,915,177,120.82	3,810,246,593.73	80,535,941.25	9,644,887,773.30
Others	75,153,095.12	25,810,131.45	59,805,200.00	41,158,026.57
<b>Total provision for impairment loss</b>	<b>1,259,126,761.92</b>	<b>636,925,559.02</b>	<b>265,775,284.42</b>	<b>1,630,277,036.52</b>
Including: Software	27,775,022.19	11,459.22	8,339,888.01	19,446,593.40
Land use rights	253,131,275.47	40,358,209.16	28,618,498.90	264,870,985.73
Patents				
Non-proprietary technology	124,834,758.81		120,310,658.30	4,524,100.51
Trademarks				
Copyrights	198,112.16			198,112.16

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Items	Opening balance	Increase in current year	Decrease in current year	Closing balance
Concession				
Exploration right	76,825,701.87	238,981,177.89	32,510,393.50	283,296,486.26
Mining right	723,330,748.86	354,951,321.14	75,995,845.71	1,002,286,224.29
Others	53,031,142.56	2,623,391.61		55,654,534.17
<b>Total carrying amount of intangible assets</b>	<b>57,405,516,709.18</b>			<b>55,908,318,114.65</b>
Including: Software	1,681,395,387.53			1,611,261,660.10
Land use rights	18,396,323,044.09			17,822,980,257.68
Patents	152,850,308.32			151,098,930.50
Non-proprietary technology	26,193,087.01			35,219,892.29
Trademarks	78,451.31			72,221.67
Copyrights	11,553,872.31			12,619,926.54
Concession	1,487,052,704.02			2,080,293,768.85
Exploration right	13,060,839,683.21			6,583,885,267.61
Mining right	22,575,554,629.62			27,591,457,419.85
Others	13,675,541.76			19,428,769.56

**8.23 Development expenditure**

Items	Opening balance	Increase in current year		Decrease in current year			Closing balance
		Internal development expenditure	Others	Intangible assets recognized	Recognized in profit or loss for the current period	Others	
Expensed expenditure		1,662,399,471.33			1,523,385,741.68	139,013,729.65	
Capitalized expenditure	194,251,430.74	90,978,687.43		36,597,376.82	150,393,529.04	25,044,264.25	73,194,948.06
<b>Total</b>	<b>194,251,430.74</b>	<b>1,753,378,158.76</b>		<b>36,597,376.82</b>	<b>1,673,779,270.72</b>	<b>164,057,993.90</b>	<b>73,194,948.06</b>

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**8.24 Goodwill**

## 1. Original carrying amount of goodwill

Name of investee or item resulting in goodwill	Opening balance	Increase in current year	Decrease in current year	Closing balance
Yunnan Copper (Group) Co., Ltd.	3,316,289,945.21			3,316,289,945.21
Lanzhou branch of Aluminum Corporation of China Ltd.	1,924,258,933.74			1,924,258,933.74
Chalco Mining International	1,693,772,908.96			1,693,772,908.96
Shanxi Huaxing Aluminium Industry Co., Ltd.	1,163,948,530.80			1,163,948,530.80
Yunnan Chihong Zinc and Germanium Co., Ltd.	1,104,629,281.70			1,104,629,281.70
Yunnan Jinding Zinc Industry Co., Ltd.	948,855,240.31			948,855,240.31
Qinghai Branch of Aluminum Corporation of China Ltd.	217,267,876.26			217,267,876.26
China Copper (Shanghai) Copper Co., Ltd.	232,126,473.80			232,126,473.80
Guangxi Branch of Aluminum Corporation of China Ltd.	189,419,065.24			189,419,065.24
Yunnan Wenshan Dunan Manganese Industry Co., Ltd.	153,179,023.47			153,179,023.47
Aluminum Corporation of China Ltd.	130,532,156.60			130,532,156.60
Qinghai Hongxin Mining Co., Ltd.	112,959,921.79			112,959,921.79
Zhongxi (Guangxi) Jinyuan Rare Earth New Materials Co., Ltd.	77,538,926.54			77,538,926.54
Yunnan Aluminium Co., Ltd.	57,611,495.90			57,611,495.90
Northeast Light alloy Co., Ltd.	55,038,932.83			55,038,932.83
Yunnan Huize Lead-zinc mine	43,470,555.17			43,470,555.17
New Baltiger Right Banner Rongda Mining Co., Ltd.	39,434,160.32			39,434,160.32
China Copper Industry Co., Ltd.	21,633,728.63			21,633,728.63
Yunnan Wenshan Aluminum Co., Ltd.	21,540,614.19			21,540,614.19
Beijing Alumineng Fresh Environment Technology Co., Ltd.	19,223,852.59			19,223,852.59

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Name of investee or item resulting in goodwill	Opening balance	Increase in current year	Decrease in current year	Closing balance
Kunming Metallurgical Research Institute Co., Ltd.	18,618,869.00			18,618,869.00
Huize Andes Mining Co., Ltd.	16,976,229.74		16,976,229.74	
Yunnan Chengyuan Investment Co., Ltd.	15,221,434.00			15,221,434.00
PT.NusapatiPrima	14,962,554.34		342,137.52	14,620,416.82
Shanghai non-ferrous trade materials Co., Ltd.	12,494,593.35			12,494,593.35
Jiangsu Guosheng New Material Co., Ltd.	10,719,626.03			10,719,626.03
Yunnan Metallurgical Group Import and Export Logistics Co., Ltd.	10,144,226.20			10,144,226.20
Yunnan Yunal Yongxin Aluminum Co., Ltd.	7,203,567.52			7,203,567.52
Yunnan Metallurgical Yunxin Silicon Material Co., Ltd.	6,142,422.57		6,142,422.57	
Yunnan Jianshui Manganese Industry Co., Ltd.	4,952,194.30			4,952,194.30
Yunnan Metallurgy Group Junan Insurance Broker Co., Ltd.	4,372,534.77		4,372,534.77	
Lhasa Tianli Mining Co., Ltd.	3,698,484.64		3,698,484.64	
Yunnan Yunal Runxin Aluminum Co., Ltd.	3,223,040.11			3,223,040.11
Ganzi Yinfeng Mining Co., Ltd.	1,819,370.00			1,819,370.00
Hangzhou Neite valve Co., Ltd.	1,039,415.00			1,039,415.00
Suzhou Xinchang Solar Thermal Energy Technology Co., Ltd.	979,119.90			979,119.90
China Non-ferrous Metals Industry Huakun Engineering Contracting Company	579,407.09			579,407.09
Chalco Science and Technology Research Institute Co., Ltd.	398,653.39			398,653.39
Kunming Kehui Electric Co., Ltd.	295,721.83			295,721.83
Yunnan CNPC Huineng Energy Co., Ltd.	189,707.14			189,707.14
<b>Total</b>	<b>11,656,762,794.97</b>		<b>31,531,809.24</b>	<b>11,625,230,985.73</b>

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2. Provision for goodwill

Name of investee or item resulting in goodwill	Opening balance	Increase in current year	Decrease in current year	Closing balance
Yunnan Wenshan Dunan Manganese Industry Co., Ltd.	153,179,023.47			153,179,023.47
Yunnan Huize Lead-zinc mine	43,470,555.17			43,470,555.17
Yunnan Wenshan Aluminum Co., Ltd.	20,640,614.19			20,640,614.19
Yunnan Chengyuan Investment Co., Ltd.	15,221,434.00			15,221,434.00
Shanghai non-ferrous trade materials Co., Ltd.	12,494,593.35			12,494,593.35
Yunnan Metallurgical Group Import and Export Logistics Co., Ltd.	10,144,226.20			10,144,226.20
Yunnan Yunal Yongxin Aluminum Co., Ltd.	7,203,567.52			7,203,567.52
Yunnan Metallurgical Yunxin Silicon Material Co., Ltd.	6,142,422.57		6,142,422.57	
Yunnan Jianshui Manganese Industry Co., Ltd.	4,952,194.30			4,952,194.30
Yunnan Metallurgy Group Junan Insurance Broker Co., Ltd.	4,372,534.77		4,372,534.77	
Yunnan Yunal Runxin Aluminum Co., Ltd.	3,223,040.11			3,223,040.11
Suzhou Xinchang Solar Thermal Energy Technology Co., Ltd.	979,119.90			979,119.90
China Non-ferrous Metals Industry Huakun Engineering Contracting Company	579,407.09			579,407.09
<b>Total</b>	<b>282,602,732.64</b>		<b>10,514,957.34</b>	<b>272,087,775.30</b>

8.25 Long-term prepaid expenses

Items	Opening balance	Increase in current year	Amortization in current year	Other decrease in current year	Closing balance	Reasons for other decrease
Compensation for demolition	630,945,011.70	98,321,790.51	147,237,985.17		582,028,817.04	
Engineering facility renovation	326,269,225.48	65,781,301.79	89,814,885.97	37,362.34	302,198,278.96	

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Items	Opening balance	Increase in current year	Amortization in current year	Other decrease in current year	Closing balance	Reasons for other decrease
Large tools and moulds	249,810,267.53	132,844,840.78	120,531,475.84		262,123,632.47	
Cutting and stripping fees	237,825,997.53	18,804,798.14	65,304,091.93		191,326,703.74	
Rental fees	71,281,686.47	17,730,499.44	27,070,186.51	2,757,333.33	59,184,666.07	
Others	290,739,989.98	107,681,146.50	134,089,626.15	2,517,519.14	261,813,991.19	
<b>Total</b>	<b>1,806,872,178.69</b>	<b>441,164,377.16</b>	<b>584,048,251.57</b>	<b>5,312,214.81</b>	<b>1,658,676,089.47</b>	

**8.26 Deferred tax assets and deferred tax liabilities**

1. Deferred tax assets and deferred tax liabilities not presented at the net amount after offset

Items	Closing balance		Opening balance	
	Deferred tax assets/liabilities	Deductible /taxable temporary difference	Deferred tax assets/liabilities	Deductible /taxable temporary difference
<b>1. Deferred tax assets</b>	<b>4,365,938,698.25</b>	<b>22,766,452,938.30</b>	<b>4,383,386,096.20</b>	<b>23,572,927,264.71</b>
Impairment loss for assets	1,889,556,806.58	10,048,252,146.11	2,499,817,471.78	13,420,529,392.27
Organization expenses				
Deductible losses	1,076,932,789.57	5,501,428,558.05	795,207,652.80	4,644,434,140.04
Offset unrealized profit	517,626,899.05	2,638,636,267.23	641,202,812.36	2,955,777,998.33
Derivative financial instruments	203,761,559.98	1,007,655,197.83	22,169,976.79	113,383,248.10
Accrued but not paid payroll	272,825,373.15	1,356,675,612.78	156,926,470.10	856,290,736.91
Depreciation and amortization differences	68,950,939.90	408,688,636.81	58,332,407.51	364,388,707.64
Deferred income	71,514,911.26	441,576,026.94	35,996,532.72	236,706,484.82
Provisions	64,887,181.47	352,138,417.18	61,091,318.23	363,732,693.39
Others	199,882,237.29	1,011,402,075.37	112,641,453.91	617,683,863.21
<b>2. Deferred tax liabilities</b>	<b>7,093,508,928.65</b>	<b>32,275,911,927.55</b>	<b>5,750,081,729.34</b>	<b>27,535,818,749.23</b>
Valuation of trading financial instruments and derivative	8,134,501.90	43,144,372.07	10,928,475.98	54,382,957.53

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financial instruments				
Fair value changes of available-for-sale financial assets recognized through other comprehensive income	383,447,735.36	1,550,697,437.61	192,333,888.59	743,651,152.15
Changes in fair value of other equity instruments	1,836,058,152.21	7,346,317,900.04	1,607,252,276.48	6,431,215,668.22
Assets evaluation appreciation	2,440,529,616.36	12,323,017,131.20	2,605,758,948.55	13,021,549,163.26
Others	2,425,338,922.82	11,012,735,086.63	1,333,808,139.74	7,285,019,808.07

2. Details of unrecognized deferred tax assets

Items	Closing balance	Opening balance
Deductible temporary differences	34,773,806,239.18	25,067,856,083.29
Deductible losses	37,382,143,119.86	40,757,461,595.46
<b>Total</b>	<b>72,155,949,359.04</b>	<b>65,825,317,678.75</b>

3. Deductible losses of unrecognized deferred tax assets that will expire in the following years:

Year	Closing balance	Opening balance	Notes
2021		5,415,124,132.47	
2022	3,947,942,002.97	4,152,705,830.71	
2023	6,346,047,841.47	6,364,582,157.21	
2024	13,153,658,670.18	13,343,582,008.61	
2025	7,728,412,633.06	9,919,307,620.35	
2026	4,862,867,631.50	811,745,187.17	
2027	62,783,236.93	62,783,236.93	
2028	120,562,587.43	120,562,587.43	
2029	423,382,023.24	423,382,023.24	
2030	143,686,811.34	143,686,811.34	
2031	592,799,681.74		
<b>Total</b>	<b>37,382,143,119.86</b>	<b>40,757,461,595.46</b>	

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**8.27 Other non-current assets**

Items	Closing balance	Opening balance
Investment in PPP highway construction period	11,692,104,908.18	6,735,604,914.95
Industrial ore and raw ore to be washed	2,952,731,244.93	2,941,267,452.29
Long-term entrusted loans	1,403,537,722.22	1,790,084,355.44
Input tax to be deducted	1,619,197,779.60	1,501,250,409.90
Advance payment for mining rights	806,533,754.89	809,721,535.21
Long-term contract assets	741,774,024.28	669,739,710.04
Tank materials	527,450,264.17	544,378,696.06
Prepaid investment	185,830,807.72	476,024,759.74
Deferred gains and losses from sale and leaseback transactions	183,005,511.37	462,846,533.24
Prepaid land and house payments	414,945,571.96	380,160,171.51
Advance payment for engineering equipment	116,434,868.98	279,428,263.80
Deferred lease income during rent-free period	376,917,295.07	257,900,062.30
Turnover materials	240,834,610.99	
Factoring receivable	929,000,000.00	
Others	321,942,527.12	453,076,728.45
<b>Total</b>	<b>22,512,240,891.48</b>	<b>17,301,483,592.93</b>

**8.28 Short-term loans**

Categories of borrowings	Closing balance	Opening balance
Pledged loan	718,604,378.90	1,045,875,767.74
Mortgage loan	523,534,133.66	1,082,705,714.82
Guaranteed loan	11,430,432,561.47	20,513,503,737.38
Credit loan	46,866,290,285.27	68,953,809,126.91
<b>Total</b>	<b>59,538,861,359.30</b>	<b>91,595,894,346.85</b>



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**8.29 Financial liabilities held for trading**

Items	Fair value at year end	Fair value at year beginning
Held for trading Financial liabilities	139,643,203.39	173,778,267.15
Including: Traded bonds issued		
Financial liabilities measured by fair value reckoned in profit and loss of the current period		
Others		
<b>Total</b>	<b>139,643,203.39</b>	<b>173,778,267.15</b>

**8.30 Financial assets sold under repurchase agreements**

Items	Closing balance	Opening balance
Notes	390,038,040.16	607,000,000.00
Bond	485,000,000.00	1,444,900,000.00
Trade certificates of deposit	491,000,000.00	107,800,000.00
Others	1,366,038,040.16	2,159,700,000.00
<b>Total</b>	<b>390,038,040.16</b>	<b>607,000,000.00</b>

**8.31 Derivative financial liabilities**

Items	Closing balance	Opening balance
Futures contract	63,179,097.36	484,381,237.72
Lock in exchange rate for foreign currency loan		19,100,700.00
<b>Total</b>	<b>63,179,097.36</b>	<b>503,481,937.72</b>

**8.32 Notes payable**

Categories	Closing balance	Opening balance
Commercial acceptances	559,903,120.33	1,018,765,079.47
Bank acceptances	14,552,669,556.59	13,538,971,312.77
<b>Total</b>	<b>15,112,572,676.92</b>	<b>14,557,736,392.24</b>

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**8.33 Account payables**

## 1. Aging analysis

<b>Aging</b>	<b>Closing balance</b>	<b>Opening balance</b>
Within 1 year (including 1 year)	29,191,124,645.75	29,508,233,484.16
1-2 years (including 2 years)	2,856,840,202.77	4,202,115,915.21
2-3 years (including 3 years)	1,718,517,084.24	1,824,853,544.39
Over 3 years	2,516,170,002.72	2,653,215,144.59
<b>Total</b>	<b>36,282,651,935.48</b>	<b>38,188,418,088.35</b>

## 2. Significant trade payables aged over one year

<b>Creditor</b>	<b>Closing balance</b>	<b>Reason for unpaid</b>
Jiangxi Construction Engineering Group Co., Ltd.	152,938,180.50	Have not reached the agreed payment conditions
Yunnan Construction Investment No.2 Construction Co., Ltd.	117,057,784.00	Have not reached the agreed payment conditions
Chongqing Qunbang Trading Co., Ltd.	64,252,560.96	Have not reached the agreed payment conditions
Jinchengxin Mining Management Co., Ltd.	62,899,958.71	Have not reached the agreed payment conditions
Seven Metallurgical Construction Group Co., Ltd.	72,150,099.06	Have not reached the agreed payment conditions
Ma Guan Yun Copper and Zinc Industry Co., Ltd.	57,000,847.81	Have not reached the agreed payment conditions
Yunnan Power Grid Co., Ltd.. Qujing Power Supply Bureau	51,879,090.00	Have not reached the agreed payment conditions
Yunnan Engineering Construction General Contracting Co., Ltd.	50,548,446.04	Have not reached the agreed payment conditions
Minmetals 23 metallurgical Construction Group Co., Ltd.	45,911,616.90	Have not reached the agreed payment conditions
HAUGS.A.	45,713,832.18	Have not reached the agreed payment conditions
Yunnan Coal Supply and Marketing Corporation supplies branch	44,513,508.72	Have not reached the agreed payment conditions
Guizhou Jinguo Construction Co., Ltd.	42,147,553.11	Have not reached the

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		agreed payment conditions
Zhoukou Longxing Highway Engineering Co., Ltd.	41,239,142.86	Have not reached the agreed payment conditions
Yunnan Construction Investment Eleventh Construction Co., Ltd.	36,453,357.89	Have not reached the agreed payment conditions
Yunnan Construction Investment Tenth Construction Co., Ltd.	33,621,704.92	Have not reached the agreed payment conditions
<b>Total</b>	<b>918,327,683.66</b>	

**8.34 Advances received from customers**

<b>Aging</b>	<b>Closing balance</b>	<b>Opening balance</b>
Within 1 year (including 1 year)	105,214,910.35	100,178,548.46
Over 1 year	118,974,234.94	134,477,014.10
<b>Total</b>	<b>224,189,145.29</b>	<b>234,655,562.56</b>

**8.35 Contract liabilities**

<b>Items</b>	<b>Closing balance</b>	<b>Opening balance</b>
Sales received in advance	4,595,043,378.92	3,963,897,020.96
Construction funds received in advance	3,178,057,224.10	2,344,161,187.31
<b>Total</b>	<b>7,773,100,603.02</b>	<b>6,308,058,208.27</b>

**8.36 Employee benefits payable**

1. Classification of employee benefits payable

<b>Items</b>	<b>Opening balance</b>	<b>Increase in current year</b>	<b>Decrease in current year</b>	<b>Closing balance</b>
Short-term employee benefits	1,390,434,136.55	21,350,334,362.80	21,052,067,180.25	1,688,701,319.10
Post-employment benefits – defined contribution plan	284,321,334.86	3,042,531,146.96	3,149,405,103.76	177,447,378.06
Termination benefits	659,706,876.64	1,018,528,551.38	1,104,644,423.54	573,591,004.48
Other benefits due within one year	13,651,515.72	950.00	9,127,469.23	4,524,996.49
Others	28,293.49	17,040,172.83	17,068,466.32	
<b>Total</b>	<b>2,348,142,157.26</b>	<b>25,428,435,183.97</b>	<b>25,332,312,643.10</b>	<b>2,444,264,698.13</b>

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**2. Short-term employee benefits**

Items	Opening balance	Increase in current year	Decrease in current year	Closing balance
Salaries, bonuses, allowances and subsidies	519,011,571.04	15,846,976,674.65	15,767,800,915.15	598,187,330.54
Employee welfare	111,490,558.53	1,195,969,757.39	1,213,503,086.46	93,957,229.46
Social Insurance	85,585,354.82	1,534,048,761.58	1,533,362,825.53	86,271,290.87
Including: Medical insurance and maternity insurance	52,929,480.54	1,338,989,875.05	1,337,790,816.45	54,128,539.14
Injury insurance	26,138,781.40	143,724,449.96	142,967,599.76	26,895,631.60
Others	6,517,092.88	51,334,436.57	52,604,409.32	5,247,120.13
Housing funds	72,867,297.51	1,527,796,369.51	1,539,058,808.51	61,604,858.51
Labor union funds and employee education funds	526,052,962.62	463,645,680.12	420,791,174.69	568,907,468.05
Short-term paid leave				
Short-term profit sharing plan	50,060,735.80	258,689,124.36	56,567,966.26	252,181,893.90
Others	25,365,656.23	523,207,995.19	520,982,403.65	27,591,247.77
<b>Total</b>	<b>1,390,434,136.55</b>	<b>21,350,334,362.80</b>	<b>21,052,067,180.25</b>	<b>1,688,701,319.10</b>

**3. Defined contribution plan**

Items	Opening balance	Increase in current year	Decrease in current year	Closing balance
Basic pensions insurance	65,413,304.31	2,161,102,556.81	2,155,452,538.84	71,063,322.28
Unemployment insurance	42,067,765.02	85,551,248.42	100,449,311.55	27,169,701.89
Annuity	176,840,265.53	795,877,341.73	893,503,253.37	79,214,353.89
<b>Total</b>	<b>284,321,334.86</b>	<b>3,042,531,146.96</b>	<b>3,149,405,103.76</b>	<b>177,447,378.06</b>

**8.37 Tax and surcharge payable**

Items	Opening balance	Payable in current year	Amount paid in current year	Closing balance
Value added tax	982,606,815.48	9,843,788,065.90	9,565,866,156.38	1,260,528,725.00
Consumption taxes	35.78	1,494,548.37	1,288,957.40	205,626.75
Resource taxes	144,997,348.18	1,516,510,664.82	1,375,777,669.92	285,730,343.08

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Items	Opening balance	Payable in current year	Amount paid in current year	Closing balance
Corporate income taxes	838,270,752.53	5,614,586,590.27	4,405,390,179.73	2,047,467,163.07
City construction and maintenance taxes	61,529,648.14	543,972,887.00	516,810,663.79	88,691,871.35
Property taxes	50,580,727.71	527,141,862.45	485,387,970.43	92,334,619.73
Land use taxes	67,664,058.39	505,378,861.61	471,965,549.22	101,077,370.78
Individual income taxes	126,704,344.45	505,109,850.15	490,659,564.73	141,154,629.87
Education surcharges (including local education surcharges)	54,577,496.82	470,805,945.33	460,869,672.38	64,513,769.77
Others	393,971,008.87	1,761,491,201.71	1,651,470,291.26	503,991,919.32
<b>Total</b>	<b>2,720,902,236.35</b>	<b>21,290,280,477.61</b>	<b>19,425,486,675.24</b>	<b>4,585,696,038.72</b>

**8.38 Other payables**

Items	Closing balance	Opening balance
Interest payable	928,274,822.51	735,525,530.25
Dividend payable	791,847,226.30	1,219,019,645.19
Other payable	12,860,686,314.90	14,703,640,702.51
<b>Total</b>	<b>14,580,808,363.71</b>	<b>16,658,185,877.95</b>

1. Interest payable

Items	Closing balance	Opening balance
Interests of long-term borrowings with interests payable by installment and principal payable upon maturity	55,917,265.39	119,150,222.56
Corporate bond interests	799,630,937.62	564,451,471.64
Interests of short-term borrowings	46,488,104.04	40,330,125.50
Interests of preference shares/ perpetual debts classified as financial liabilities		
Other interests	26,238,515.46	11,593,710.55
<b>Total</b>	<b>928,274,822.51</b>	<b>735,525,530.25</b>

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## 2. Dividend payable

Items	Closing balance	Opening balance
Dividends for ordinary shares	597,387,315.12	398,477,504.65
Preferred shares classified as equity instruments dividends on perpetual bonds	191,271,011.62	817,353,240.98
Others	3,188,899.56	3,188,899.56
<b>Total</b>	<b>791,847,226.30</b>	<b>1,219,019,645.19</b>

## 3. Other payable

Items	Closing balance	Opening balance
Engineering, materials and equipment	2,958,445,169.19	5,750,516,867.89
Cash pledge and guarantee deposit	4,872,106,477.46	4,182,882,277.60
Temporary receipts of payment on behalf of others	697,561,992.81	1,382,580,900.59
Intercourse funds	759,232,067.15	907,180,145.16
Temporary borrowings	831,184,573.45	737,664,031.28
Share acquisition	1,076,171,284.65	353,643,312.50
Rental service fees	74,977,259.54	222,431,463.65
Repair fees	185,867,408.15	154,255,117.47
Party Construction expenses	236,731,579.45	136,305,647.24
Labor fees	194,313,761.96	130,977,906.81
Others	974,094,741.09	745,203,032.32
<b>Total</b>	<b>12,860,686,314.90</b>	<b>14,703,640,702.51</b>

**8.39 Non-current liabilities due within one year**

Items	Closing balance	Opening balance
Long-term loans due within one year	17,476,651,709.96	12,451,694,168.05
Bonds payable due within one year	12,102,735,373.45	19,111,739,193.60
Long-term payables due within one year	684,286,444.54	1,655,605,135.12
Other long-term liabilities due within one year	68,729,338.86	887,130,103.28
Other long-term liabilities due within one year	487,499,783.45	354,751,288.89

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Items	Closing balance	Opening balance
<b>Total</b>	<b>30,819,902,650.26</b>	<b>34,460,919,888.94</b>

**8.40 Other current liabilities**

Items	Closing balance	Opening balance
Short-term bonds payable	21,882,453,196.80	25,387,336,412.76
Output tax to be transferred	2,178,530,923.04	2,058,268,959.54
ABS continues to be involved in liabilities	18,900,000.00	18,900,000.00
A 1-year finance lease loan	190,836,866.71	269,500,000.00
Others	11,915,944.55	264,555.51
<b>Total</b>	<b>24,282,636,931.10</b>	<b>27,734,269,927.81</b>

**8.41 Long-term borrowings**

Items	Closing balance	Opening balance
Pledged loan	4,321,769,149.12	3,997,377,902.51
Mortgage loan	11,123,451,004.15	11,088,687,730.22
Guaranteed loan	16,726,502,856.73	19,901,278,416.94
Credit loan	104,728,723,806.66	80,895,689,882.00
<b>Total</b>	<b>136,900,446,816.66</b>	<b>115,883,033,931.67</b>

**8.42 Bonds payable**

1. Categories of bonds payable

Items	Closing balance	Opening balance
Senior dollar bond	5,056,142,902.00	8,482,849,934.78
\$500 million of senior Perpetual Notes -3 years	3,173,179,588.11	
\$500 million of senior Perpetual Notes -5 years	3,170,409,359.77	
Aluminum set MTN005	2,000,000,000.00	2,000,000,000.00
Chinalco set MTN007	2,000,000,000.00	2,000,000,000.00
Aluminum set MTN001	2,000,000,000.00	
Aluminum set MTN002	2,000,000,000.00	

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Aluminum set MTN003	2,000,000,000.00	
The second phase of public issuance of corporate bonds in 2019	1,997,440,194.09	1,997,264,737.15
The first term notes of 2019	1,989,089,859.78	1,985,264,050.70
21 Aluminum set MTN004	1,948,553,800.00	
In 2018, the second phase of public issuance of corporate bonds	1,597,987,729.03	1,597,070,992.36
Aluminum set MTN001A	1,500,000,000.00	1,430,812,770.00
The ticket MTN001	1,033,525,000.00	880,751,200.00
18 Aluminum set MTN002B	1,000,000,000.00	1,000,000,000.00
Aluminum set MTN002	1,000,000,000.00	1,000,000,000.00
Aluminum set MTN003	1,000,000,000.00	1,000,000,000.00
Aluminum set MTN005	1,000,000,000.00	
The second phase of public issuance of corporate bonds in 2020	999,786,860.88	999,616,669.38
The first term notes of 2021	997,028,325.08	
The first public issue of corporate bonds in 2018	899,323,394.50	898,806,855.29
The first term notes for 2020	898,865,889.03	897,972,259.16
21 chinalco 01	511,104,109.59	
20 cloud copper 01	500,000,000.00	500,000,000.00
Aluminum set MTN001B	500,000,000.00	500,000,000.00
The first phase of public issuance of corporate bonds in 2020	499,875,726.52	499,853,135.50
Open source - Chinalco lease supply side reform No. 1		146,471,835.43
17 Chalco MTN005		2,000,000,000.00
Aluminum set MTN001		2,000,000,000.00
Aluminum set MTN002		2,000,000,000.00
The first public issue of corporate bonds in 2019		1,999,196,298.40
The third public issue of corporate bonds in 2019		999,623,191.20
<b>Total</b>	<b>41,272,312,738.38</b>	<b>36,815,553,929.35</b>



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2. Changes in bonds payable (preferred stocks/ perpetual debts divided into financial liabilities excluded)

Bond name	Par value	Issue date	Bond term	Issued Amount	Opening balance	Issued in current year	Interest at par value	Amortization of premium price	Repayment in current year	Closing balance
Open source - Chinalco lease supply side reform No. 1	145,152,100.00	2018/8/30	3 年	1,390,000,000.00	146,471,835.43				146,471,835.43	
21 chinalco 01	500,000,000.00	2021/6/28	3 年	500,000,000.00		500,000,000.00	11,104,109.59			511,104,109.59
Senior dollar bond	13,595,020,000.00	2017/4/21	5 年	13,560,265,484.00	8,482,849,934.78	5,104,880,000.00		127,899,562.81	8,403,687,469.97	5,056,142,902.00
The ticket MTN001	1,000,000,000.00	2020/3/24	5 年	1,000,000,000.00	880,751,200.00	151,086,300.00	42,187,500.00		40,500,000.00	1,033,525,000.00
20 cloud copper 01	500,000,000.00	2006/6/2	3 年	1,000,000,000.00	500,000,000.00		18,898,224.03		18,898,224.03	500,000,000.00
18 Aluminum set MTN002B	1,000,000,000.00	2018/7/13	5 年	1,000,000,000.00	1,000,000,000.00					1,000,000,000.00
Aluminum set MTN005	2,000,000,000.00	2019/8/15	5 年	2,000,000,000.00	2,000,000,000.00					2,000,000,000.00
Chinalco set MTN007	2,000,000,000.00	2019/10/16	5 年	2,000,000,000.00	2,000,000,000.00					2,000,000,000.00
Aluminum set MTN001A	1,500,000,000.00	2020/3/13	5 年	1,500,000,000.00	1,430,812,770.00	69,187,230.00				1,500,000,000.00
Aluminum set	500,000,000.00	2020/3/13	10 年	500,000,000.00	500,000,000.00					500,000,000.00

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Bond name	Par value	Issue date	Bond term	Issued Amount	Opening balance	Issued in current year	Interest at par value	Amortization of premium price	Repayment in current year	Closing balance
MTN001B										
Aluminum MTN002 set	1,000,000,000.00	2020/8/26	3 年	1,000,000,000.00	1,000,000,000.00					1,000,000,000.00
Aluminum MTN003 set	1,000,000,000.00	2020/9/18	5 年	1,000,000,000.00	1,000,000,000.00					1,000,000,000.00
Aluminum MTN001 set	2,000,000,000.00	2021/4/16	2 年	2,000,000,000.00		2,000,000,000.00				2,000,000,000.00
Aluminum MTN002 set	2,000,000,000.00	2021/6/25	3 年	2,000,000,000.00		2,000,000,000.00				2,000,000,000.00
Aluminum MTN003 set	2,000,000,000.00	2021/8/16	3 年	2,000,000,000.00		2,000,000,000.00				2,000,000,000.00
21 Aluminum MTN004 set	2,000,000,000.00	2021/8/25	3 年	2,000,000,000.00		1,948,553,800.00				1,948,553,800.00
Aluminum MTN005 set	1,000,000,000.00	2021/10/22	3 年	1,000,000,000.00		1,000,000,000.00				1,000,000,000.00
17 Chalco MTN005	2,000,000,000.00	2017/10/30	5 年	2,000,000,000.00	2,000,000,000.00				2,000,000,000.00	
Aluminum MTN001 set	2,000,000,000.00	2019/1/24	3 年	2,000,000,000.00	2,000,000,000.00				2,000,000,000.00	
Aluminum MTN002 set	2,000,000,000.00	2019/4/24	3 年	2,000,000,000.00	2,000,000,000.00				2,000,000,000.00	

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Bond name	Par value	Issue date	Bond term	Issued Amount	Opening balance	Issued in current year	Interest at par value	Amortization of premium price	Repayment in current year	Closing balance
The first term notes of 2018	2,000,000,000.00	2018/3/22	3 年	1,982,000,000.00						
The first term notes of 2019	2,000,000,000.00	2019/5/24	5 年	1,980,000,000.00	1,985,264,050.70			-3,825,809.08		1,989,089,859.78
The first term notes for 2020	900,000,000.00	2020/3/26	3 年	897,300,000.00	897,972,259.16			-893,629.87		898,865,889.03
The first term notes of 2021	1,000,000,000.00	2021/12/17	3 年	997,000,000.00		997,000,000.00		-28,325.08		997,028,325.08
The first public issue of corporate bonds in 2018	1,100,000,000.00	2018/9/14	3 年	1,096,700,000.00						
The first public issue of corporate bonds in 2018	900,000,000.00	2018/9/14	5 年	897,300,000.00	898,806,855.29			-516,539.21		899,323,394.50
In 2018, the second phase of public issuance of corporate bonds	1,400,000,000.00	2018/11/14	3 年	1,395,800,000.00						
In 2018, the second phase of public issuance	1,600,000,000.00	2018/11/14	5 年	1,595,200,000.00	1,597,070,992.36			-916,736.67		1,597,987,729.03

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Bond name	Par value	Issue date	Bond term	Issued Amount	Opening balance	Issued in current year	Interest at par value	Amortization of premium price	Repayment in current year	Closing balance
of corporate bonds										
The second phase of public issuance of corporate bonds in 2019	2,000,000,000.00	2019/8/8	10 年	1,977,000,000.00	1,997,264,737.15			-175,456.94		1,997,440,194.09
The first phase of public issuance of corporate bonds in 2020	500,000,000.00	2020/3/4	5 年	499,835,000.00	499,853,135.50			-22,591.02		499,875,726.52
The second phase of public issuance of corporate bonds in 2020	1,000,000,000.00	2020/3/19	3 年	999,486,000.00	999,616,669.38			-170,191.50		999,786,860.88
The first public issue of corporate bonds in 2019	2,000,000,000.00	2019/1/22	3 年	1,998,002,000.00	1,999,196,298.40			-613,020.06	1,999,809,318.46	
The third public issue of corporate bonds in 2019	1,000,000,000.00	2019/9/4	3 年	999,400,000.00	999,623,191.20			-166,785.19	999,789,976.39	
2018 Chinalco Hong Kong	2,550,280,000.00	2018/9/7	3 年	2,722,384,000.00						

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Bond name	Par value	Issue date	Bond term	Issued Amount	Opening balance	Issued in current year	Interest at par value	Amortization of premium price	Repayment in current year	Closing balance
three-year senior notes										
\$500 million of senior Perpetual Notes -3 years	3,187,850,000.00	2021/7/28	3 年	3,212,761,130.35		3,212,761,130.35		39,581,542.24		3,173,179,588.11
\$500 million of senior Perpetual Notes -5 years	3,187,850,000.00	2021/7/28	5 年	3,210,823,070.35		3,210,823,070.35		40,413,710.58		3,170,409,359.77
<b>Total</b>	<b>66,066,152,100.00</b>			<b>67,911,256,684.70</b>	<b>36,815,553,929.35</b>	<b>22,194,291,530.70</b>	<b>72,189,833.62</b>	<b>200,565,731.01</b>	<b>17,609,156,824.28</b>	<b>41,272,312,738.38</b>

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**8.43 Lease liabilities**

Items	Closing balance	Opening balance
Lease payments	3,270,686,083.00	3,072,795,657.24
Less: Unrecognized Financial Charges	885,660,935.92	1,269,008,256.86
Non-current liabilities reclassified to due within one year	487,499,783.45	354,751,288.89
<b>Net lease liabilities</b>	<b>1,897,525,363.63</b>	<b>1,449,036,111.49</b>

**8.44 Long-term payables**

Items	Opening balance	Increase in current year	Decrease in current year	Closing balance
<b>Long-term payables</b>	2,146,483,645.96	3,183,349,345.66	2,742,311,483.17	2,587,521,508.45
<b>Special payables</b>	472,725,499.84	78,775,157.73	151,158,485.31	400,342,172.26
<b>Total</b>	<b>2,619,209,145.80</b>	<b>3,262,124,503.39</b>	<b>2,893,469,968.48</b>	<b>2,987,863,680.71</b>

(1) Top five long-term payables

Items	Closing balance	Opening balance
Yunnan Provincial Department of Natural Resources	659,397,457.00	358,340,000.00
China Foreign Trade Financial Leasing Co., LTD	349,536,175.19	396,140,998.40
Mining right transfer fee of Yunnan Provincial Department of Land and Resources	256,242,695.25	155,799,525.46
Pudong Bank Financial Leasing Co. LTD	178,236,842.13	240,217,763.16
Wenshan Zhuang and Miao Autonomous Prefecture Natural Resources and Planning Bureau	53,130,858.35	
<b>Total</b>	<b>1,496,544,027.92</b>	<b>1,150,498,287.02</b>

(2) Top five special payables

Items	Opening balance	Increase in current year	Decrease in current year	Closing balance
Relocation allowance	138,759,747.82	5,022.76	8,376,703.65	130,388,066.93
National Emergency Drill and Training Base	21,000,000.00			21,000,000.00
Subsidy for reconstruction of shanty	98,521,825.81	1,832.59	84,928,301.25	13,595,357.15

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Items	Opening balance	Increase in current year	Decrease in current year	Closing balance
towns in mines				
Hospital land rights return	12,278,900.00			12,278,900.00
The salary and retirement allowance of the staff before the transition	14,162,389.49	2,318,800.00	720,770.92	15,760,418.57
<b>Total</b>	<b>284,722,863.12</b>	<b>2,325,655.35</b>	<b>94,025,775.82</b>	<b>193,022,742.65</b>

**8.45 Long-term employee benefits payable**

Items	Opening balance	Increase in current year	Decrease in current year	Closing balance
Post-employment benefits -defined benefit plan (net debt)	817,806,230.91	34,958,552.28	88,792,002.26	763,972,780.93
Termination benefits	593,332,311.95	39,609,374.98	245,267,591.82	387,674,095.11
Other long-term benefits	29,170,929.24	0.00	3,363,253.42	25,807,675.82
<b>Total</b>	<b>1,440,309,472.10</b>	<b>74,567,927.26</b>	<b>337,422,847.50</b>	<b>1,177,454,551.86</b>

**8.46 Provisions**

Items	Closing balance	Opening balance
Disposal expense	3,231,130,664.59	2,496,483,940.75
External guarantee	63,310,797.85	25,074,189.07
Pending litigation	290,491,602.66	262,623,694.92
Product warranty	11,979,449.27	11,191,226.69
Restructuring obligations		
Onerous loss contracts to be performed	42,150,692.36	44,296,000.00
Others	1,304,133,867.79	854,194,836.63
<b>Total</b>	<b>4,943,197,074.52</b>	<b>3,693,863,888.06</b>

**8.47 Deferred income**

Items	Opening balance	Increase in current year	Decrease in current year	Closing balance
Compensation for demolition	228,069,724.49	5,073,777.88	129,264,505.39	103,878,996.98
Scientific research project	162,032,293.23	180,379,193.07	148,473,594.75	193,937,891.55

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Interest subsidy from government	84,083,425.17		17,168,425.17	66,915,000.00
Sale and leaseback	58,843,999.78		8,213,471.04	50,630,528.74
Environmental protection project	58,734,275.12	70,620,206.93	61,450,946.00	67,903,536.05
Others	89,350,226.02	44,314,383.32	65,252,858.33	68,411,751.01
<b>Total</b>	<b>681,113,943.81</b>	<b>300,387,561.20</b>	<b>429,823,800.68</b>	<b>551,677,704.33</b>

**8.48 Other Non-current Liabilities**

Items	Closing balance	Opening balance
Output tax to be transferred	108,544,982.55	182,859,154.52
Lease payments for mining area	23,363,385.40	23,274,232.56
Principal and interest on subordinated debt	11,893,397.26	
Borrowings		45,000,000.00
Others	8,000,000.00	10,196,397.68
<b>Total</b>	<b>151,801,765.21</b>	<b>261,329,784.76</b>

**8.49 Paid-in capital**

Name of Investors	Opening balance		Increase in current year	Decrease in current year	Closing balance	
	Amount invested	Proportion (%)			Amount invested	Proportion (%)
State-owned Assets Supervision and Administration Commission (SASAC)	22,680,000,000.00	90.00			22,680,000,000.00	90.00
National Council for Social Security Fund (SSF)	2,520,000,000.00	10.00			2,520,000,000.00	10.00
<b>Total</b>	<b>25,200,000,000.00</b>	<b>100.00</b>			<b>25,200,000,000.00</b>	<b>100.00</b>



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**8.50 Other equity instruments**

Financial instruments issued	Opening balance	Increase in the year	Decrease in current year	Closing balance
Perpetual bond	118,570,114,193.43		1,500,052,808.00	117,070,061,385.43
<b>Total</b>	<b>118,570,114,193.43</b>		<b>1,500,052,808.00</b>	<b>117,070,061,385.43</b>

**8.51 Capital reserve**

Items	Opening balance	Increase in current year	Decrease in current year	Closing balance
Capital (or share) premiums	4,064,721,508.31		468,890,456.92	3,595,831,051.39
Other capital reserve <sup>Notes</sup>	23,021,098,698.60			23,021,098,698.60
<b>Total</b>	<b>27,085,820,206.91</b>		<b>468,890,456.92</b>	<b>26,616,929,749.99</b>
Including: Exclusive state-owned capital reserve				

Notes: (1) In accordance with the Agreement on Strategic Cooperation and Capital Increase and Share Expansion of China Copper Co., Ltd. signed by the Company and other shareholders of its subsidiary China Copper Co., Ltd. and relevant supplementary agreement, the Company purchases 3.5955% equity of China Copper Co., Ltd. held by Kunming Heze Investment Center (Limited partnership). The difference between the company's newly acquired long-term equity investment by purchasing minority shares and the net assets of the subsidiary continuously calculated from the date of purchase based on the proportion of newly added shares shall be recognized as reducing the capital reserve by RMB 1.115 billion;

(2) Yunnan Aluminium Co.,Ltd., a subsidiary of our company China Copper Co.,Ltd., issued 340 million shares in a non-public offering on December 20, 2021. The Company has confirmed the capital premium of Yunnan Aluminium Co.,Ltd. Due to the additional issuance of shares in accordance with the comprehensive shareholding ratio, and the confirmed capital reserve has increased by RMB 664 million.

**8.52 Special reserves**

Items	Opening balance	Increase in current year	Decrease in current year	Closing balance	Notes
Safety reserve	412,988,945.49	722,819,670.39	657,806,265.35	478,002,350.53	
Keep simple reproduction expenses	511,129.95			511,129.95	
Others					
<b>Total</b>	<b>413,500,075.44</b>	<b>722,819,670.39</b>	<b>657,806,265.35</b>	<b>478,513,480.48</b>	

Note: The special reserve is mainly based on the requirements of the Group in accordance with the provisions of the [2012] No. 16 "Administrative Measures for the Extraction and Use of Enterprise Work Safety Expenses" promulgated by the Ministry of Finance and the State Administration of Work Safety on 14 February 2012. Provisions of mining and gas production, transportation, metallurgy, machinery manufacturing, and construction services are recognized with corresponding safety production fees.

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**8.53 Surplus reserve**

Items	Opening balance	Increase in current year	Decrease in current year	Closing balance
Statutory surplus reserve	1,419,398,973.78			1,419,398,973.78
Discretionary surplus reserve				
Reserve fund				
Enterprise development fund				
Others				
<b>Total</b>	<b>1,419,398,973.78</b>			<b>1,419,398,973.78</b>

**8.54 Retained earnings**

Items	Current year	Prior year
Retained earnings at the beginning of the period	-58,660,489,325.97	-55,215,641,880.45
Initial adjustment amount	460,325,395.30	
Balance at beginning of current year	-58,200,163,930.67	-55,215,641,880.45
Add for the period	9,023,440,245.70	1,972,108,433.57
Including: Net profit attributable to owners of the Group for the period	9,023,440,245.70	1,972,108,433.57
Other adjustments		
Less for the period	2,144,738,866.08	5,416,955,879.09
Including: Appropriation to surplus reserve		
Appropriation to general risk reserve	7,508,727.32	85,703,391.86
Dividends distributed in the year		
Transfer to paid-in capital		
Others <sup>Note</sup>	2,137,230,138.76	5,331,252,487.23
Closing balance	-51,321,462,551.05	-58,660,489,325.97

Notes: (1) The group distributed interest on perpetual bonds in this period, reducing the total amount of undistributed profit by 1.948 billion yuan;

(2)The group this year in accordance with the countries do hair [2016] no. 45 forward State-owned Assets Supervision and Administration Commission of the State Council General Office of the State Council, Ministry of Finance about state-owned enterprise worker families "three for raised" notice separation handover work guidance

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and (CaiQi [2005] no. 62), the Ministry of Finance on enterprise separation notice for social functions on the problem of financial management of the relevant provisions , the total amount of write-down of undistributed profit is 234 million yuan.

**8.55 Operating Revenue and Operating Costs**

Items	Current year		Prior year	
	Revenue	Costs	Revenue	Costs
<b>Subtotal of main business</b>	<b>510,299,242,885.41</b>	<b>448,003,361,598.37</b>	<b>357,762,849,880.02</b>	<b>320,327,116,871.65</b>
Sale of product	488,432,426,728.77	429,164,739,418.68	339,247,190,003.88	304,100,873,687.73
Engineering construction	21,866,816,156.64	18,838,622,179.69	18,515,659,876.14	16,226,243,183.92
<b>Subtotal of other business</b>	<b>8,051,363,042.73</b>	<b>6,925,591,206.99</b>	<b>8,868,726,864.43</b>	<b>7,500,149,436.75</b>
Sale of materials	6,154,317,530.12	5,433,130,858.42	5,731,285,731.20	5,124,734,184.25
Others	1,897,045,512.61	1,492,460,348.57	3,137,441,133.23	2,375,415,252.50
<b>Total</b>	<b>518,350,605,928.14</b>	<b>454,928,952,805.36</b>	<b>366,631,576,744.45</b>	<b>327,827,266,308.40</b>

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**8.56 Selling expenses**

Items	Current year	Prior year
Transportation expense	14,308,069.04	1,785,907,660.37
Salaries	671,238,336.55	573,699,374.57
Packing expense	27,056,728.99	390,758,903.03
Handling charges	33,023,132.31	145,794,035.18
Storage fee	41,962,700.22	69,583,037.59
Sales and service fees	6,589,659.58	63,194,293.69
Lease fee	7,896,043.88	50,833,656.28
Travel expense	46,700,773.20	43,875,270.22
Depreciation expense	44,992,932.87	40,637,359.01
Business expense	26,607,320.73	25,065,783.58
Office allowance	7,425,928.11	21,333,432.16
Repair expense	15,663,122.60	8,184,444.24
Insurance expense	13,014,464.73	7,433,582.74
Exhibition fees	2,694,204.01	3,468,416.34
Post and communication fees	2,900,785.11	2,629,835.95
Loss of products and samples	944,156.24	2,250,641.01
Utility expense	3,321,167.43	2,180,967.26
Others	132,376,044.57	381,192,918.36
<b>Total</b>	<b>1,098,715,570.17</b>	<b>3,618,023,611.58</b>

**8.57 Administrative expenses**

Items	Current year	Prior year
Salaries	7,493,839,379.60	5,945,539,633.46
Repair expense	390,920,720.74	721,966,851.64
Depreciation	872,730,476.64	719,224,247.97

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Depreciation of useable assets	168,115,636.92	
Amortization	604,441,088.02	418,984,353.71
Loss on cessation	382,661,192.39	415,579,965.21
Agency fees	197,147,929.84	219,121,399.39
Exploration expense	185,740,519.41	153,992,910.97
Travel expense	123,801,061.13	116,223,045.92
Consulting fees	114,734,525.62	97,678,617.30
Insurance expense	75,019,059.84	73,911,093.27
Office allowance	74,887,976.45	72,224,101.51
Transportation expense	68,670,253.28	69,663,595.13
Safety production fees	65,055,329.42	54,808,961.44
Party Construction expense	57,666,713.60	82,379,600.08
Business entertainment expense	56,360,349.50	48,689,620.96
Legal fees	50,879,713.63	44,363,179.21
Pollutant discharge fees	11,449,243.36	12,496,743.43
Conference expense	12,065,940.21	6,640,244.46
Others	984,079,983.47	813,552,714.12
<b>Total</b>	<b>11,990,267,093.07</b>	<b>10,087,040,879.18</b>

**8.58 Financial Expenses**

Items	Current year	Prior year
Interest expenses	11,440,190,444.88	13,060,803,191.57
Interest income	520,980,279.83	1,095,531,367.89
Net exchange loss(Net income marked with "-")	364,373,691.71	483,483,450.29
Others	735,274,515.58	834,654,971.31
<b>Total</b>	<b>12,018,858,372.34</b>	<b>13,283,410,245.28</b>

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**8.59 Other income**

<b>Items</b>	<b>Current year</b>	<b>Prior year</b>
VAT levied immediately returned	185,213,817.66	184,603,034.00
Special support funds	70,435,195.92	26,363,005.03
Government grants	99,097,661.20	126,649,614.61
Others	9,036,141.99	35,686,165.27
<b>Total</b>	<b>363,782,816.77</b>	<b>373,301,818.91</b>

**8.60 Investment income**

<b>Sources of investment income</b>	<b>Current year</b>	<b>Prior year</b>
Income from long-term equity investments under equity method	123,110,877.86	380,141,819.19
Cost accounting of long-term equity investment returns		
Income from disposal of long-term equity investments	-654,769,411.24	1,314,298,530.39
Investment income during the holding period of a trading financial asset	-51,915,396.21	36,760,863.80
Investment gains from disposal of trading financial assets	-547,097,107.96	10,728,929.90
Investment income of other equity instruments during investment holding period	11,438,377,825.57	84,862,420.24
Investment income of financial assets measured at fair value and recorded into current profit and loss during holding period (old criteria apply)		22,200,732.85
Investment income from disposal of financial assets measured at fair value and whose changes are recorded in current profit and loss (old criteria apply)		583,735,262.61
Investment returns on held-to-maturity investments during the holding period (old criteria apply)		10,771,235.14
Investment gains from disposal of held-to-maturity investments (old criteria apply)		368,290.35
Investment income from financial assets, etc. available for sale (old criteria apply)		5,032,228,192.99
Investment proceeds from disposal of financial assets available for sale (old criteria apply)		321,634,986.50
Investment income during the holding period of debt investment	35,339,616.71	

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Sources of investment income	Current year	Prior year
Investment income from the disposal of debt investments	3,409,836.85	
Investment income of other creditor's rights investment during holding period	117,625,162.49	
Investment income from disposal of other creditor's rights investments	30,854,126.44	
Gains arising from re-measurement of equity at fair value when controlling right is acquired		
Gain generated by re-measurement of the remaining equity at fair value after loss of control right		
Realized gain (loss) on the invalid part of cash flow hedging	-5,165,318.43	
Investment gains resulting from debt restructuring	-72,031,842.55	
Others	-12,084,976.55	-181,961,877.35
<b>Total</b>	<b>123,110,877.86</b>	<b>380,141,819.19</b>

**8.61 Profit/(loss) from changes in fair value**

Sources of gains on changes in fair value	Current year	Prior year
Financial assets held for trading (applicable under new Standards for Financial Instruments)	8,618,217.60	111,415,286.89
Financial assets measured at fair value through profit or loss (applicable under former Standards for Financial Instruments)		-1,546,981.90
Derivative financial assets	-5,349,075.00	-21,958,715.20
Other non-current financial assets	1,572,420.70	
Financial liabilities held for trading (applicable under new Standards for Financial Instruments)	-98,426,396.20	-28,084,718.45
Financial liabilities at fair value through profit or loss (applicable under former Standards for Financial Instruments)		-31,034,253.05
Derivative financial liabilities	221,052.50	
Investment properties measured at fair value		
Others	3,389,305.26	-2,138,710.28
<b>Total</b>	<b>-89,974,475.14</b>	<b>26,651,908.01</b>

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**8.62 Credit impairment losses**

Items	Current year	Prior year
Impairment loss for bad debts	-2,631,659,761.45	-1,904,110,260.92
Credit impairment loss of debt investment		
Other debt investment impairment losses	-242,112.79	
Others	-114,342,760.40	-3,999,862.57
<b>Total</b>	<b>-2,746,244,634.64</b>	<b>-1,908,110,123.49</b>

**8.63 Asset impairment losses**

Items	Current year	Prior year
Impairment loss for bad debts (applicable under former Standards )		-448,304,547.46
Impairment loss for inventories	-1,683,188,258.08	-1,466,284,552.98
Impairment loss for contract assets	31,906,197.44	-440,212,555.70
Contract acquisition cost impairment loss		
Contract performance cost impairment loss		
Impairment losses on assets held for sale		
Impairment loss for available-for-sale financial assets		-147,183,405.32
Impairment loss for held-to-maturity investments		11,326,850.00
Impairment loss for long-term equity investments	-10,568,187.57	-66,725,953.09
Impairment loss for investment properties	-17,624,636.00	-7,794,720.21
Impairment loss for fixed assets	-4,754,942,263.30	-1,252,476,091.28
Impairment loss of engineering materials	-344,354.70	
Impairment loss for construction in progress	-1,082,963,816.63	-287,668,840.88
Impairment loss of productive biological assets		
Impairment losses on oil and gas assets		
Impairment loss for right-of-use assets	-67,744,058.15	-15,790,482.70
Impairment loss for intangible assets	-636,925,559.02	-639,405,529.70
Impairment loss for goodwill		-12,494,593.35
Others	-951,127,766.91	-185,644,455.30



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Items	Current year	Prior year
<b>Total</b>	<b>-9,173,522,702.92</b>	<b>-4,958,658,877.97</b>

**8.64 Gains on disposal of assets**

Items	Current year	Prior year	The amount of the non-recurring gains and losses of the year
Income from disposal of fixed assets	153,073,961.19	-11,916,427.19	153,073,961.19
Income from land purchase and storage		84,612,405.28	
Income from disposal of intangible assets	326,821,584.08	66,581,644.75	326,821,584.08
Others	-82,543.13	804,853.52	-82,543.13
<b>Total</b>	<b>479,813,002.14</b>	<b>140,082,476.36</b>	<b>479,813,002.14</b>

**8.65 Non-operating Income**

**1. Details of non-operating income**

Items	Current year	Prior year	The amount of the non-recurring gains and losses of the year
Gains on retirement of non-current assets	52,871,487.57	13,013,445.24	52,871,487.57
Donations received	5,147,656.34	26,889.60	5,147,656.34
Government grants unrelated to normal course of business	619,264,856.16	293,492,149.47	619,264,856.16
Indemnity	97,917,542.21	286,980,193.41	97,917,542.21
Amount that cannot be paid	101,199,345.66	104,417,425.25	101,199,345.66
Gains on liquidation of Zhongfu Aluminum		89,493,378.29	
Others	98,525,383.07	81,025,887.55	98,525,383.07
<b>Total</b>	<b>974,926,271.01</b>	<b>868,449,368.81</b>	<b>974,926,271.01</b>

**2. Details of government grants**

Items	Current year	Prior year
Subsidies for "Sangongyiye"	545,214,789.92	162,394,675.62
Land premium compensation		108,738,593.57
Industrial development fund	700,000.00	6,259,892.58

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Items	Current year	Prior year
Yiliang Chihong government high water stage pool relocation compensation		4,732,199.38
Subsidy for No.1 pump land resumption		2,000,000.00
Subsidy for exceptional poverty	8,255,800.00	
Subsidies for moving to Xicheng District	50,000,000.00	
Subsidies for high-tech enterprises	1,990,747.15	
Housing renovation subsidy	5,881,758.19	
Other small-scale subsidies	7,221,760.90	9,366,788.32
<b>Total</b>	<b>619,264,856.16</b>	<b>293,492,149.47</b>

**8.66 Non-operating expenses**

Items	Current year	Prior year	The amount of the non-recurring gains and losses of the year
Losses on disposal of non-current assets	1,452,408,057.78	368,927,689.36	1,452,408,057.78
Donations	75,893,046.08	79,930,158.21	75,893,046.08
Penalty and overdue fine	264,873,610.80	190,514,268.21	264,873,610.80
Overseas epidemic prevention fees	93,171,738.45	86,301,026.32	93,171,738.45
"Sangongyiye"		5,029,700.75	
Losses on cessation		9,997,589.20	
Others	283,983,687.52	225,322,094.24	283,983,687.52
<b>Total</b>	<b>2,170,330,140.63</b>	<b>966,022,526.29</b>	<b>2,170,330,140.63</b>

**8.67 Income tax expenses**

Items	Current year	Prior year
Current income tax expense	5,519,199,711.02	2,286,052,996.17
Adjustment of deferred income taxes	804,557,992.59	309,111,926.21
Others	6,166,830.19	
<b>Total</b>	<b>6,329,924,533.80</b>	<b>2,595,164,922.38</b>

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**8.68 Other comprehensive income attributed to owners/shareholders of the company**

1. Other items of comprehensive income and its income tax impact and transfer profit and loss

Items	Current year		
	Pre-tax amount	Income tax	After-tax amount
<b>1. Other comprehensive income that cannot be reclassified into profit or loss</b>	<b>4,003,655,644.88</b>	<b>273,447,495.12</b>	<b>3,730,208,149.76</b>
(1). Remeasurement of defined benefit plan - changes in net liability /(net asset)	-4,649,794.45	-919,600.00	-3,730,194.45
(2). Other comprehensive income that cannot be reclassified to profit or loss under equity method	2,830,561.79		2,830,561.79
(3). Equity instrument designated as at fair value through other comprehensive income - Changes in fair value	4,005,474,877.54	274,367,095.12	3,731,107,782.42
(4). Company's credit risk - Changes in fair value			
(5). Others			
<b>2. Other comprehensive income that may be reclassified subsequently to profit or loss</b>	<b>-3,508,827,834.72</b>	<b>-63,480,296.38</b>	<b>-3,445,347,538.34</b>
(1). Other comprehensive income that can be reclassified to profit or loss under equity method	-20,548,144.82	161,091.08	-20,709,235.90
Less: Amount previously recognized in other comprehensive income and reclassified to profit or loss in current period			
Subtotal	-20,548,144.82	161,091.08	-20,709,235.90
(2). Debt instrument measured at fair value through other comprehensive income - Changes in fair value	73,383,713.90	19,833,436.19	53,550,277.71
Less: Amount previously recognized in other comprehensive income and reclassified to profit or loss in current period			
Subtotal	73,383,713.90	19,833,436.19	53,550,277.71
(3). Gains or losses on changes in fair value of available-for-sale financial assets			
Less: Amount previously recognized in other comprehensive income and reclassified to profit or loss in current period			
Subtotal			
(4). Reclassification of financial assets to other			

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Items	Current year		
	Pre-tax amount	Income tax	After-tax amount
comprehensive income			
Less: Amount previously recognized in other comprehensive income and reclassified to profit or loss in current period			
Subtotal			
(5). Gains or losses on reclassification of held-to-maturity investments to available-for-sale financial assets			
Less: Amount previously recognized in other comprehensive income and reclassified to profit or loss in current period			
Subtotal			
(6). Debt instrument measured at fair value through other comprehensive income - Credit impairment loss	217,901.51		217,901.51
Less: Amount previously recognized in other comprehensive income and reclassified to profit or loss in current period			
Subtotal	217,901.51		217,901.51
(7). Cash flow hedge reserve (Effective portion of gains or losses on cash flow hedge)	85,898,371.47	33,443,872.82	52,454,498.65
Less: Amount transfer to initial cost of the hedged item			
Other comprehensive income and reclassified to profit or loss in current period	-247,581,120.44	-48,388,585.71	-199,192,534.73
Subtotal	333,479,491.91	81,832,458.53	251,647,033.38
(8). Translation differences of financial statements presented in foreign currencies	-3,295,438,773.66		-3,295,438,773.66
Less: Amount previously recognized in other comprehensive income and reclassified to profit or loss in current period	599,922,023.56	165,307,282.18	434,614,741.38
Subtotal	-3,895,360,797.22	-165,307,282.18	-3,730,053,515.04
(9). Others			
Less: Amount previously recognized in other comprehensive income and reclassified to profit or loss in current period			

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Items	Current year		
	Pre-tax amount	Income tax	After-tax amount
Subtotal			
<b>3. Total other comprehensive income</b>	<b>493,238,935.79</b>	<b>209,967,198.74</b>	<b>284,860,611.42</b>

(Continued)

Items	Prior year		
	Pre-tax amount	Income tax	Pre-tax amount
<b>1. Other comprehensive income that cannot be reclassified into profit or loss</b>	<b>-31,574,139.39</b>	<b>-3,895,060.46</b>	<b>-27,679,078.93</b>
(1). Remeasurement of defined benefit plan - changes in net liability /(net asset)	-2,334,929.08	-246,500.68	-2,088,428.40
(2). Other comprehensive income that cannot be reclassified to profit or loss under equity method	-803,854.61		-803,854.61
(3). Equity instrument designated as at fair value through other comprehensive income - Changes in fair value	-28,435,355.70	-3,648,559.78	-24,786,795.92
(4). Company's credit risk - Changes in fair value			
(5). Others			
<b>2. Other comprehensive income that may be reclassified subsequently to profit or loss</b>	<b>-9,135,977,279.82</b>	<b>-271,174,103.16</b>	<b>-8,864,803,176.66</b>
(1). Other comprehensive income that can be reclassified to profit or loss under equity method	-793,878.33	-161,091.08	-632,787.25
Less: Amount previously recognized in other comprehensive income and reclassified to profit or loss in current period			
Subtotal	-793,878.33	-161,091.08	-632,787.25
(2). Debt instrument measured at fair value through other comprehensive income - Changes in fair value			
Less: Amount previously recognized in other comprehensive income and reclassified to profit or loss in current period			
Subtotal			
(3). Gains or losses on changes in fair value of available-for-sale financial assets	11,245,874.10	1,699,291.67	9,546,582.43

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Items	Prior year		
	Pre-tax amount	Income tax	Pre-tax amount
Less: Amount previously recognized in other comprehensive income and reclassified to profit or loss in current period			
Subtotal	11,245,874.10	1,699,291.67	9,546,582.43
(4). Reclassification of financial assets to other comprehensive income			
Less: Amount previously recognized in other comprehensive income and reclassified to profit or loss in current period			
Subtotal			
(5). Gains or losses on reclassification of held-to-maturity investments to available-for-sale financial assets			
Less: Amount previously recognized in other comprehensive income and reclassified to profit or loss in current period			
Subtotal			
(6). Debt instrument measured at fair value through other comprehensive income - Credit impairment loss			
Less: Amount previously recognized in other comprehensive income and reclassified to profit or loss in current period			
Subtotal			
(7). Cash flow hedge reserve (Effective portion of gains or losses on cash flow hedge)	-250,718,972.80	-39,359,767.09	-211,359,205.71
Less: Amount transfer to initial cost of the hedged item			
Other comprehensive income and reclassified to profit or loss in current period	64,352,858.92	9,989,581.66	54,363,277.26
Subtotal	-315,071,831.72	-49,349,348.75	-265,722,482.97
(8). Translation differences of financial statements presented in foreign currencies	-8,831,357,443.87	-223,362,955.00	-8,607,994,488.87
Less: Amount previously recognized in other comprehensive income and reclassified to profit or loss in current period			

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Items	Prior year		
	Pre-tax amount	Income tax	Pre-tax amount
Subtotal	-8,831,357,443.87	-223,362,955.00	-8,607,994,488.87
(9). Others	-9,167,551,419.21	-275,069,163.62	-8,892,482,255.59
Less: Amount previously recognized in other comprehensive income and reclassified to profit or loss in current period	-31,574,139.39	-3,895,060.46	-27,679,078.93
Subtotal	-2,334,929.08	-246,500.68	-2,088,428.40
<b>3. Total other comprehensive income</b>	<b>-803,854.61</b>		<b>-803,854.61</b>

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**8.69 Segment information**

Items	Aluminum sector		Copper sector		Lead and zinc Sector		Engineering Sector	
	Current year	Prior year	Current year	Prior year	Current year	Prior year	Current year	Prior year
Operating Revenue	350,888,514,156.26	244,315,174,129.25	132,441,318,292.27	87,173,868,732.44	26,074,430,945.19	22,885,020,028.28	23,973,799,046.53	24,792,638,612.61
Income from investment in joint ventures and associates	422,295,097.46	318,490,181.01	486,589,222.71	356,145,973.63	-6,623,695.29	11,204,301.38	12,574,082.25	20,736,899.25
Asset impairment losses	-5,805,676,322.09	-2,354,265,824.84	-2,544,646,654.92	-2,544,646,654.92	-261,225,875.81	-261,225,875.81	-329,129,876.33	-329,129,876.33
Credit impairment losses (applicable under new Standards)	-1,404,742,644.51	-966,494,952.79	-70,193,608.45	14,102,147.47	-30,129,441.89	7,184,396.71	-1,046,936,782.42	-1,058,840,091.11
Income before tax	14,510,355,366.08	3,061,234,074.99	3,640,522,988.11	1,105,941,137.43	974,974,119.99	452,656,814.56	-887,557,304.97	-1,762,857,018.03
Income tax expenses	2,836,498,790.18	725,713,497.92	2,642,766,846.02	1,284,466,872.26	315,476,154.99	162,617,607.71	117,287,780.80	44,108,943.33
Net income	11,673,856,575.90	2,335,520,577.07	997,756,142.09	-178,525,734.83	659,497,965.00	290,039,206.85	-1,004,845,085.77	-1,806,965,961.36
Total assets	262,653,770,610.76	269,201,721,987.27	128,678,936,783.99	125,042,553,015.28	33,878,064,907.98	34,783,792,093.93	60,285,212,250.64	56,175,838,939.38
Total liabilities	156,050,837,171.26	171,011,442,170.05	100,190,027,105.85	97,437,719,400.16	14,636,399,868.82	15,423,990,599.19	43,682,466,768.75	40,306,032,594.38

(Continued)

Items	Tombarthite Sector		Others		Offset		Total	
	Current year	Prior year	Current year	Prior year	Current year	Prior year	Current year	Prior year
Operating Revenue	6,990,968,925.66	4,110,915,700.29	21,066,708,392.66	17,551,065,360.60	-43,085,133,830.43	-34,197,105,819.02	518,350,605,928.14	366,631,576,744.45
Income from investment in joint ventures and associates	-8,431,538.54	-155,845.16	193,072,217.79	91,115,859.24	-976,364,508.52	-417,395,550.16	123,110,877.86	380,141,819.19
Asset impairment losses	-65,263,806.62	-65,263,806.62	-198,371,208.82	-198,371,208.82	30,791,041.67	794,244,369.37	-9,173,522,702.92	-4,958,658,877.97



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Items	Tombarthite Sector		Others		Offset		Total	
	Current year	Prior year	Current year	Prior year	Current year	Prior year	Current year	Prior year
Credit impairment losses (applicable under new Standards)	-8,969,956.94		-382,306,200.72	-919,413.89	197,034,000.29	96,857,790.12	-2,746,244,634.64	-1,908,110,123.49
Income before tax	590,854,305.16	134,629,720.44	12,060,128,872.11	6,107,546,896.53	-4,584,839,416.88	-2,864,923,077.18	26,304,438,929.60	6,234,228,548.74
Income tax expenses	90,580,000.34	32,597,819.18	345,066,372.40	338,560,541.42	-17,751,410.93	7,099,640.56	6,329,924,533.80	2,595,164,922.38
Net income	500,274,304.82	102,031,901.26	11,715,062,499.71	5,768,986,355.11	-4,567,088,005.95	-2,872,022,717.74	19,974,514,395.80	3,639,063,626.36
Total assets	6,326,733,181.09	4,959,910,661.13	457,431,957,840.44	434,084,122,167.76	-324,811,617,614.34	-300,961,416,004.75	624,443,057,960.56	623,286,522,860.00
Total liabilities	1,995,362,612.93	1,403,985,641.82	195,639,358,512.73	177,706,031,163.93	-116,879,991,099.74	-96,299,226,869.93	395,314,460,940.60	406,989,974,699.60

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**8.70 Consolidated cash flow statement**

## 1. Supplementary information for consolidated cash flow statement

Items	Current year	Prior year
<b>1. To reconcile net profit to cash flows from operating activities:</b>		
Net profit	19,974,514,395.80	3,639,063,626.36
Add: Asset Impairment losses	9,173,522,702.92	4,958,658,877.97
Credit impairment losses (applicable under new Standards)	2,746,244,634.64	1,908,110,123.49
Depreciations of fixed assets, oil and gas assets, and bearer biological assets	17,376,156,622.58	17,579,909,609.38
Amortizations of right-of-use assets	477,152,579.03	
Amortizations of intangible assets	2,358,095,412.16	2,016,619,365.11
Amortizations of long-term prepaid expenses	584,048,251.57	599,059,378.32
Losses on disposal of fixed assets, intangible assets and other long-term assets (gain expressed with "-")	-479,813,002.14	-140,082,476.36
Losses on disposal of fixed assets (gain expressed with "-")	1,399,536,570.21	355,914,244.12
Losses on changes in fair value (gain expressed with "-")	89,974,475.14	-26,651,908.01
Financial expenses (gain expressed with "-")	11,804,564,136.59	13,060,803,191.57
Investment losses (gain expressed with "-")	-10,405,653,392.98	-7,615,769,386.61
Decrease in deferred tax assets (increase expressed with "-")	-17,447,397.95	-121,985,465.58
Increase in deferred tax liabilities (decrease expressed with "-")	1,343,427,199.31	587,501,455.03
Decrease in inventories (increase expressed with "-")	2,237,845,291.78	1,421,023,001.98
Decrease in operating receivables (increase expressed with "-")	1,331,781,908.82	-577,654,382.77
Increase in operating payables (decrease expressed with "-")	-7,554,307,663.15	-6,936,745,734.40
Others		
Net cash flows from operating activities	52,439,642,724.33	30,707,773,519.60
<b>2. Significant investing and financing activities that do not involve cash receipts and payments</b>		
Debts converted to capital		
Convertible debts due within one year		
Fixed assets acquired in under finance lease		

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Items	Current year	Prior year
<b>3. Net changes in cash and cash equivalents</b>		
Closing balance of cash	67,958,611,618.42	43,585,266,544.07
Less: Opening balance of cash	43,585,266,544.07	45,343,026,020.40
Add: Closing balance of cash equivalents		
Less: Opening balance of cash equivalents		
Net increase in cash and cash equivalents	24,373,345,074.35	-1,757,759,476.33

**2. Cash and cash equivalents**

Items	Current year	Prior year
I. Cash	67,958,611,618.42	43,585,266,544.07
Including: Cash on hand	1,898,492.89	2,600,540.32
Bank deposits that are available for payment at anytime	53,724,318,520.66	33,873,962,982.56
Other monetary fund that are available for payment at anytime	392,501,331.37	385,957,352.56
Demand deposits in central bank that are available for payment at anytime		
Deposits in banks and other financial institutions	13,839,893,273.50	9,322,745,668.63
Cash equivalents		
Including: Bond investments due within three months		
Closing balance of cash and cash equivalents	67,958,611,618.42	43,585,266,544.07
Including: Cash and cash equivalents with restricted use of parent company or subsidiaries		

**8.71 Foreign currency monetary items**

Items	Closing balance in foreign currency	Exchange rate	Closing balance in RMB (translated)
<b>Cash at bank and in hand</b>			<b>25,272,817,048.68</b>
Including: USD	3,915,061,704.37	6.3757	24,965,360,195.98
EUR	1,847,751.62	7.2197	13,340,346.91
HKD	131,527,580.54	0.8176	107,536,949.85
SOL/ NE	59,458,663.82	1.6022	95,264,671.17

**ALUMINUM CORPORATION OF CHINA (Consolidated) Notes to the financial statements for the year of 2021**

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(Unless otherwise specified, the notes to the financial statements are all presented in RMB)

Items	Closing balance in foreign currency	Exchange rate	Closing balance in RMB (translated)
CAD	1,234,632.73	5.0046	6,178,842.96
BOB	2,471,726.74	0.9160	2,264,101.69
AUD	1,763,670.52	4.6220	8,151,685.14
CNF	4,284,844,742.86	0.0007	2,999,391.32
IDR	8,054,719,400.00	0.0004	3,221,887.76
VND	6,963,143,633.33	0.0003	2,088,943.09
INR	58,236,257.18	0.0857	4,990,847.24
IDR	121,118,164,780.00	0.0005	60,559,082.39
MYR	427,919.57	1.5267	653,304.81
SAR	121,760.70	1.6984	206,798.37
<b>Accounts receivables</b>			<b>2,515,400,850.82</b>
Including: USD	379,781,497.10	6.3757	2,421,372,891.07
EUR	6,469,310.28	7.2197	46,706,479.43
SOL/ NE	295,690.75	1.6022	473,755.72
AUD	927.33	4.6220	4,286.12
VND	130,247,611,166.67	0.0003	39,074,283.35
INR	28,832,666.51	0.0857	2,470,959.52
HKD	6,480,180.54	0.8176	5,298,195.61
<b>Short-term borrowings</b>			<b>12,218,557,790.78</b>
Including: USD	1,916,426,085.10	6.3757	12,218,557,790.78
<b>Long-term borrowings</b>			<b>9,273,867,801.31</b>
Including: USD	1,450,656,978.18	6.3757	9,248,953,695.78
JPY	155,116,235.56	0.0554	8,593,439.45
VND	54,402,220,266.67	0.0003	16,320,666.08
<b>Bonds payable</b>			<b>38,580,039,248.15</b>
Including: USD	6,051,106,427.24	6.3757	38,580,039,248.15

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**8.72 Restricted ownership and rights assets**

Items	Book value at year end	Reason for restriction
Cash and cash equivalents	4,780,790,255.56	Note 1
Notes receivable	118,896,436.95	Note 2
Accounts receivable	1,164,996,276.74	Note 3
Receivables financing	871,512,625.11	Note 4
Inventories	358,093,131.13	Note 5
Fixed assets	9,989,226,198.42	Note 6
Intangible assets	2,822,969,139.17	Note 7
Others	45,681,721.94	

Note 1: The reasons for restriction on monetary funds with restricted ownership and use rights, refer to note 8.1.

Note 2: Closing balance of cash and Cash equivalents note 2: As of December 31, 2021, the amount of notes receivable of the Group with limited ownership and use rights is RMB 118,896,436.95, mainly the notes receivable pledged by the Company's subsidiary, Aluminum Corporation of China High-end Manufacturing Co., LTD.

Note 3: As of December 31, 2021, the amount of receivables with limited ownership and use rights of the Group is RMB 1,164,996,276.74, mainly due to RMB 1,156,755,487.49 used by aluminum Corporation of China (CHINALCO), a subsidiary of the Company, as a pledge to obtain bank loans.

Note 4: As of December 31, 2021, the financing amount of receivables with limited ownership and use rights of the Group is 871,512,625.11 yuan, mainly in the form of 826,231,081.74 yuan of notes pledged by aluminum Corporation of China, a subsidiary of the Company.

Note 5: As of December 31, 2021, the amount of the group's inventory with limited ownership and use rights is RMB 358,093,131.13, which is mainly the inventory of China Copper Co., LTD., a subsidiary of the Company, which has been closed due to litigation

Note 6: As of December 31, 2021, the amount of fixed assets under the restriction of ownership and use right of the Group is 9,989,226,198.42 YUAN, which is mainly 4,094,288,591.30 yuan of fixed rent from China Copper Co., LTD., a subsidiary of the Company, due to loan mortgage and financing; RMB 5,111,164,825.29 of fixed assets mortgaged by the company's subsidiary Aluminum Corporation of China (ChalCO); The fixed assets of aluminum Corporation of China high-end Manufacturing Co., LTD., a subsidiary of the company, are RMB 758,372,254.45 pledged by financial leasing.

Note 7: As of December 31, 2021, the amount of intangible assets with limited ownership and use rights of the Group is RMB 2,822,969,139.17 yuan, mainly RMB 1,579,654,809.50 yuan of intangible assets mortgaged by the company's subsidiary Aluminum Corporation of China Limited due to loans; RMB 669,108,615.55 of intangible assets mortgaged and guaranteed by loans of China Copper Co., LTD., a subsidiary of the Company; The intangible assets pledged by the company's subsidiary, Aluminum Corporation of China high-end Manufacturing Co., LTD., amounted to RMB 561,874,894.37.

**Note 9 Contingencies****9.1 Pending litigation**

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1. T Aluminum Corporation of China (CHALCO), a subsidiary of the Company, and its affiliated units are defendants in several lawsuits. Although the outcome of such proceedings or other legal proceedings cannot be determined at this time, chalCO's management believes that any liability arising will not have a material adverse effect on the Financial position or operating performance of the Group. As of the date of this report, ChalCO is still confirming the carbon emission data of some thermal power plants with relevant government departments, so as to avoid undertaking unnecessary carbon emission performance obligations, which will not result in significant unpaid liabilities of the Company.

2. In China's copper industry co., LTD. The company's subsidiary units they belong to yuxi mining co., LTD. (hereinafter referred to as the yuxi mining) as the plaintiff, for buying and selling contract dispute the yunnan simao shanshui copper industry co., LTD. (hereinafter referred to as simao shanshui) as the defendant appeal to the intermediate people's court of yuxi city, yunnan province, the case involving 22227.44 ten thousand yuan. Yuxi Mining and Simao Shanshui signed the Contract for Entrusted Processing of Copper Ore on September 20, 2016. Simao Shanshui did not fully fulfill its obligations as agreed in the contract. Yuxi Mining sent letters to Simao Shanshui for many times to fulfill the contract, but Simao Shanshui has not delivered 823,500 tons of copper ore corresponding to copper concentrate for processing to Yuxi Mining. In August 2019, Yuxi Mining filed a lawsuit against Simao Shanshui. In October 2019, Simao Mountain Water filed an objection to the jurisdiction of The Yuxi Intermediate People's Court. After the objection was rejected by the Yuxi Intermediate People's Court, Simao Mountain Water filed an appeal of the objection to the jurisdiction of the Yuxi Intermediate People's Court in December 2019, and the Yunnan High People's Court rejected the appeal of the Objection to the jurisdiction of Simao Mountain Water in April 2020. The case was under the jurisdiction of yuxi Intermediate People's Court. And then the relevant to the case facts, simao shanshui another shareholder pu-erh tea and the industry and trade co., LTD. (hereinafter referred to as pu 'er mountain) in November 2019 to yuxi intermediary court litigation, the disputes are related to the company by suing the yuxi mining and three natural persons, filed for court confirmation signed with simao shanshui yuxi mining of copper ore contracts on the processing and other invalid contract and related documents, And ordered yuxi mining to return simao mountain water all copper concentrate. In November 2020, Yuxi Intermediate People's Court of first instance rejected pu 'er Shanhai's lawsuit. In December 2020, Pu 'er Shanhai appealed against the verdict of the first instance. The second trial was held in The High People's Court of Yunnan Province in August 2021. During the second instance of the case, Pu 'er Shanhai, Yuxi Mining And Simao Shanshui signed the Settlement Agreement on January 13, 2022. On January 14, 2022, Pu 'er Shanhai applied to Yunnan High People's Court to withdraw the lawsuit against Yuxi Mining. Yunnan High People's Court issued a Civil order granting Pu 'er Shanhai to withdraw the lawsuit on January 24, 2022, and the case has been concluded. On January 26, 2022, Under the auspices of the Intermediate people of Yuxi City, Yuxi Mining And Simuo Shanshui conducted mediation on the dispute case of entrusted processing contract of copper ore, and the court issued the Civil Mediation Document. The mediation statement confirmed that the case was legal and valid in relation to the Contract for entrusted processing of copper ore, and the performance was terminated on January 26, 2022.

3. China copper industry co., LTD. The company's subsidiary units they belong to yunnan chuxiong mining and metallurgy co., LTD., monding Hao Jiahe copper ore (hereinafter referred to as Hao Jiahe) as the developer, and shuangyashan fangyuan construction and installation co., LTD. (hereinafter referred to as the shuangyashan company) was signed in May 2017 the monding Hao Jiahe copper mine deep mining engineering construction contract in 2017. In May 2018, the Mou Ding Hao Jiahe Copper Mine in 2017 Deep Mining Engineering Construction Contract Supplementary Agreement was signed. According to the monthly project settlement statement of both parties, Haojiahe Mine still owes Shuangyashan Company part of the project balance payment, due to the suspension of production has no funds to pay. Shuangyashan Company sued Haojiahe Mine and Chuxiong Mining and Metallurgy Co., Ltd. to Chuxiong State Intermediate People's Court in July 2021 after repeated demands for payment of project funds and losses totaling 46.4893 million yuan. The court heard on August 26, 2021, and the judgment has not been issued until the reporting date.

4. Chinalco International Engineering Co., LTD., a subsidiary of the Company, and its subordinate units have several pending lawsuits related to construction contract disputes, sales contract disputes, loan contract disputes and security contract disputes, which are listed as follows:

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No.	Plaintiff/applicant/appellant	The defendant/respondent/appellee	Cause of action	Investment amount (Ten thousand)
1	Chinalco International Engineering Co. LTD	Qingdao Xinfu Co-create Asset Management Co., LTD., Shandong Real Estate Development Group Qingdao Co., LTD., Liang Yongjian, Wang Xiaoning, Qingdao Liangyou Catering Co., LTD	Other Civil disputes	90,921.54
2	China Color 12 Metallurgical Construction Co., LTD	Huainan Zhongsheng company, Zhi Rongcheng Company, Beijing Chenglong Company, Ganzhou Hualong Company, Chen Quanhong	Equity, equity transfer, joint venture and cooperation, joint venture and other disputes	75,199.00
3	Guiyang Aluminum magnesium Design and Research Institute Engineering Contracting Co., LTD	Guizhou Huada Real Estate Development Co. LTD	Construction project contract dispute	51,729.85
4	Chinalco International Engineering Co. LTD guiyang Branch	Guizhou Huaren New Material Co. LTD	Construction project contract dispute	39,092.16
5	Chalco International Engineering Equipment Co. LTD	Shandong better wheel tyre co., LTD., SHANDONGHOMERUNTIRESCO., LTD, shandong branch Wallace rubber group co., LTD., Qingdao fu mai chi HaoXuan in tyre co., LTD., Qingdao international trade co., LTD	Disputes over sales Contract	34,868.06
6	China Nonferrous Metal Industry No.6 Metallurgical Construction Co. LTD	Shougang Jingtang Union Co. LTD	Construction project contract dispute	29,228.11
7	Chinalco International Engineering Co. LTD	The coal group,	Construction project contract dispute	26,264.83
8	Guiyang Aluminum magnesium Design and Research Institute Engineering Contracting Co., LTD	Anshun Xixiu District Town Investment development Co., LTD., Guizhou Huada Real Estate Development Co., LTD	Dispute over Security Contract	25,775.00
9	Chalco International Engineering Equipment Co. LTD	Xinjiang Jiarun Resources Holding Co. LTD	Disputes over sales Contract	20,300.00

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No.	Plaintiff/applicant/appellant	The defendant/respondent/appellee	Cause of action	Investment amount (Ten thousand)
10	Chinalco International (Tianjin) Construction Co., LTD	Tianjin purple mountain environmental protection industry investment co., LTD., tianjin wu qing, and its fruits of the purple environmental protection co., LTD., ziyang environmental protection co., LTD., day light purple environmental protection investment holding co., LTD., day purple environmental protection equipment manufacturing (tianjin) co., LTD., China (tianjin) international trade co., LTD., the source of Gao Wei huatian purple environmental protection industry development co., LTD	Construction project contract dispute	17,669.55
11	Guizhou Huaren New Material Co. LTD	Chinalco International Guiyang Branch	Construction project contract dispute	14,523.36
12	Mianchi Branch of China Mining Construction Group Co., LTD	Chinalco Zhongzhou Mining Co., LTD, Chinalco Zhongzhou Mining Co., LTD sanmenxia Branch	Construction project contract dispute	12,906.00
13	China Nonferrous Metal Industry No.6 Metallurgical Construction Co. LTD	Yingkou Zhongwang Aluminum Co., LTD	Construction project contract dispute	12,786.60
14	China fourth Metallurgical Construction Co. LTD	Changsha Nonferrous Metallurgy Design and Research Institute Co. LTD	Construction project contract dispute	8,434.06
15	No.6 Metallurgical Construction Co., LTD., No.6 Metallurgical Construction Co., LTD., No.1 Branch of China Nonferrous Metals Industry	Henan Hongxuan Real Estate Co. LTD	Construction project contract dispute	7,953.70
16	China Nonferrous Metals Industry Xi'an Geotechnical Engineering Co., LTD	Chinalco International Engineering Co., LTD. Shenyang Branch	Construction project contract dispute	7,539.50
17	Chinalco International Shandong Chemical Co. LTD	Huang Zhongqing, Huang Shunqing, Zhao Youjie, Shandong Jiata Plastic Packaging Co., LTD., Huang Chunqing, Huang Feng, Lin Yulei	Disputes over sales Contract	7,461.06



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No.	Plaintiff/applicant/appellant	The defendant/respondent/appellee	Cause of action	Investment amount (Ten thousand)
18	China Nonferrous Metal Industry No.6 Metallurgical Construction Co. LTD	Kaili Transportation Bureau Kaili Municipal Government	Construction project contract dispute	7,460.07
19	China Color 12 Metallurgical Construction Co., LTD	China Aviation Oil North Storage and Transportation Co. LTD	Construction project contract dispute	7,286.80
20	Sevene Civil Engineering Co., LTD	Guiyang Aluminum magnesium Design and Research Institute Engineering Contracting Co., LTD. Guiyang Aluminum magnesium Design and Research Institute Co., LTD	Construction project contract dispute	6,734.50
21	China Color 12 Metallurgical Construction Co., LTD	Pilatus Aircraft Maintenance Engineering (Chongqing) Co., LTD	Construction project contract dispute	6,601.02
22	China Nonferrous Metal Industry No.6 Metallurgical Construction Co. LTD	Tianjin Zhongwang Aluminum Industry Co., LTD	Construction project contract dispute	6,585.31
23	China Color 12 Metallurgical Construction Co., LTD	Xi 'an Coordinated Urban and Rural Construction Investment and Development Co., LTD. Xi xian Investment Co., LTD	Dispute over loan Contract	6,320.00
24	China Nonferrous Metal Industry No.6 Metallurgical Construction Co. LTD	Xinjiang Qinghua Investment Holding Co., LTD. Xinjiang Qinghua Energy Group Co., LTD	Construction project contract dispute	6,136.02
25	Qiu Haijie, Zhang Jun, Guo Zhiming, Zeng Minghai	Boyuan Real Estate Company of Hohhot Economic and Technological Development Zone	Construction project contract dispute	6,095.49
26	Shanghai Chalco International Supply Chain Management Co., LTD	Shanghai Jinxiang aluminum Co., LTD	Disputes over sales Contract	5,836.77
27	Chalco Great Wall Construction Co. LTD	Changege Hongji weiye Real Estate Development Co. LTD	Construction project contract dispute	5,621.55
28	Lv Yikui	Panjin Hetai Real Estate Development Co., LTD., Shenyang Aluminum magnesium Design and Research Institute Co., LTD., Liaoning Jindi	Construction project contract dispute	5,600.00

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No.	Plaintiff/applicant/appellant	The defendant/respondent/appellee	Cause of action	Investment amount (Ten thousand)
		Second Construction Engineering Co., LTD		
29	China Nonferrous Metal Industry No.6 Metallurgical Construction Co. LTD	Zhonghe Anshan Shengshide Real Estate Co. LTD	Construction project contract dispute	5,500.00
30	China Color 12 Metallurgical Construction Co., LTD	Taiyuan Jiaxin Palm Real Estate Development Co. LTD	Construction project contract dispute	5,331.00
31	China Color 12 Metallurgical Construction Co., LTD	North Heavy Industry Group Co. LTD	Construction project contract dispute	5,303.76
32	China Nonferrous Metal Industry No.6 Metallurgical Construction Co. LTD	Inner Mongolia Hengda Real Estate Co. LTD	Construction project contract dispute	5,208.36

5. Chalco Guangxi Guosheng Rare Earth Development Co., LTD., a subsidiary of Chalco China Rare Earth Co., LTD., is involved in a lawsuit over a construction project subcontract dispute. According to the Civil Order No. 1680-7 of GUI 1421 at the beginning of the Republic of China issued by the People's Court of Fusui County, Guangxi Zhuang Autonomous Region (2016), The plaintiff Qian Long, Guangxi Construction Engineering Co., LTD., v. the defendant Guangxi East Overseas Investment Group Co., LTD., the defendant Eight Smelting Construction Group Co., LTD. Southwest Branch, the defendant Eight Metallurgical Construction Group Co., LTD., the defendant Chinalco Countries Hold Rare Earth Development Co., LTD. Guangxi Construction Engineering Subcontracting Contract Dispute Case, the plaintiff to the court to apply for property preservation, On December 7, 2016 and December 14, 2016, the court made civil orders No. 1680-3 and 1680-5 of GUI 1421 in the early Republic of China respectively, freezing the deposit of 3 million yuan of Chinalco Guangxi Guosheng Rare Earth Development Co., Ltd. in bank of China Chongzuo Sub-branch account 619763869707. No judgment had been issued by the reporting date.

**9.2 External guarantee**

Chinalco International Engineering Co., LTD., a subsidiary of the company, is jointly and severally responsible for Mianxian Urban and Rural Infrastructure Construction Co., LTD.'s loan of 100 million yuan from the Agricultural Development Bank of China, with a maturity date of October 19, 2027. As of December 31, 2021, the guaranteed balance is 54,50.00 million yuan.

**9.3 Commitment matters**

1. The Company's subsidiaries China Aluminum International Engineering Corporation Limited (the "Chinalco International") and Yunnan Communications Investment and Construction Group Co., Ltd. (the "Yunnan Communications Investment") formed a social capital consortium to jointly invest with the local government in the establishment of three project companies, Yunnan Ningyong Expressway Co., Ltd. (the "Ningyong Expressway"), Yunnan Linyun Expressway Co., Ltd. (the "Linyun Expressway"), and Yunnan Linshuang Expressway Co., Ltd. (the "Linshuang Expressway"), to construct and operate related expressways in PPP mode. Chinalco International, Yunnan Communications Investment and the investment entities designated by local government hold 30%, 40%, and 30% of the above three PPP project companies respectively.

The capital composition of each project company are as follows:

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The investment entities designated by local government to invest 30% of the total project investment (of which RMB 30 million as registered capital, the rest as capital reserves). Chinalco International and Yunnan Communications Investment invest RMB 30 million and RMB 40 million respectively as subscribed registered capital.

Meanwhile, Chinalco International and Yunnan Communications Investment provide credit enhancement for the differences between the total investment and capital of the project companies according to the relative proportion of the shareholding ratio (which is 3:4), and assume the obligation to raise funds for the shortfall in funding during the operating of the project companies, which shall be borne by Chinalco International at the proportion of 42.86% and by Yunnan Communications Investment in the proportion of 57.14%.

According to the relevant agreement, Chinalco International shall provide credit enhancements of no more than RMB 4.559 billion, RMB 3.19 billion, and RMB 2.086 billion (not more than RMB 9.835 billion in total) to Ningyong Expressway, Linyun Expressway, and Yunnan Linshuang Investment Loans respectively, and a letter of commitment to make up the difference shall be signed. The letter of commitment shall be signed respectively within the credit enhancement limit after negotiation with the relevant creditors.

As of the reporting date, the actual letter of commitment to make up for the difference signed and credit enhancements provided by Chinalco International are as follows:

Ningyong Expressway received RMB 11 billion in bank credit, and Chinalco International provided a letter of commitment to make up the difference of RMB 9.347 billion at the rate of 42.86%. The bank has actually issued RMB 7.672 billion in loans, of which RMB 3.288 billion was provided by Chinalco International with credit enhancement.

Linyun Expressway received RMB 10.1 billion in bank credit, and Chinalco International provided a letter of commitment to make up the difference of RMB 6 billion at the rate of 42.86%. The bank has actually issued RMB 5.5 billion in loans, of which RMB 2.357 billion was provided by Chinalco International with credit enhancement.

Linshuang Expressway received RMB 9.9 billion in bank credit, and Chinalco International provided a letter of commitment to make up the difference of RMB 4.32 billion at the rate of 42.86%. The bank has actually issued RMB 3.37 billion in loans, of which RMB 1.444 billion was provided by Chinalco International with credit enhancement.

### **Note 10 Subsequent events occurring after the balance sheet date**

#### **10.1 Free transfer of subsidiary equity**

In January 2022, the Company signed a free transfer agreement with China Rare Earth Group Co., LTD., which stipulates that the Company will transfer 47.18% of the equity held by China Rare Earth Co., LTD to China Rare Earth Group Co., LTD., which has been approved by the State-owned Assets Supervision and Administration Commission of the State Council.

#### **10.2 Issue bonds**

1. In February 2022, Chinalco Capital Holdings Limited, a subsidiary of the Company, issued a senior unsecured bond with a principal amount of US \$600 million, and the Company guaranteed the issuance of the bond. The notes mature on February 24, 2027 and carry a fixed coupon of 2.95 per cent.
2. On 19 January 2022, Aluminum Corporation of China Limited, a subsidiary of the company, issued the first ultra-short-term financing bond of 2021 with a total face value of RMB 2 billion (RMB 100 face value per unit) at a fair price. It expires in October 2022 to meet working capital and replace mature loans. The fixed annual coupon rate of these bonds is 2.49%.
3. On January 26, 2022, aluminum Corporation of China (ChalCO), a subsidiary of the Company, issued medium-term notes with a principal amount of RMB 2 billion and an annual interest rate of 3% maturing in January 2025. The medium-term notes will pay interest once a year from January 26, 2022 and Chinalco intends to use the proceeds from the offering to refinance existing debt.
4. Beijing Financial Asset Exchange agrees to accept the registration of Chinalco International Engineering Co., LTD., a subsidiary of the Company, in the Beijing Financial Asset Exchange to issue debt financing plan. The registered amount of the debt financing plan of Chinalco International Engineering Co., Ltd. is 1.6 billion yuan, and the registered amount will be valid for 2 years from October 2021. In January 2022, Chinalco International Engineering Co., Ltd. issued the first phase of debt financing plan of 2022 of 350 million.

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**Note 11 Relationships and Transactions with Related Parties****11.1 Subsidiaries**

See Note 7 “Business Combination and Consolidated Financial Statements”.

**11.2 Joint ventures and associates**

See Note 8.15 “Long-term Equity Investments”

**11.3 Related Party Relationships**

<b>Name of related parties</b>	<b>Related Party Relationships</b>
Chinalco Zibo International Trade Co., LTD.	Joint venture of the group
Zhongheng Cooperation Investment Co., LTD.	Joint venture of the group
China Merchants Products Co., LTD.	Joint venture of the group
Yunnan Simao Shanshui Copper Co., LTD.	Joint venture of the group
Tianjin Junxin Lightweight Technology Co., LTD.	Associates of the group
Shanxi Huatuo Aluminum Co., LTD.	Associates of the group
Qinghai Chalco Industrial Service Co., LTD.	Associates of the group
Lualaba Copper Smelting Co., LTD.	Associates of the group
Loudi Zhongyu New Material Co., LTD.	Joint venture of the group
Longxi Northwest aluminum bridge Welding Material Co., LTD.	Associates of the group
Henan Huashun Tiancheng Technology Co., LTD.	Associates of the group
Guizhou Aluminum Aluminum Co., LTD.	Associates of the group
Guangxi Huazhong Building Materials Co., LTD.	Associates of the group
Guangxi Huayin Aluminum Industry Co., LTD.	Joint venture of the group
Guangxi Hualei New Material Co., LTD.	Joint venture of the group
Fuzhou Jiaotou Ruimin Trading Co., LTD.	Associates of the group
Baotou Tiancheng Aluminum Co., LTD.	Associates of the group
Petrochina Chinalco (Beijing) Petrochemical Co., LTD.	Joint venture of the group
Zhengzhou Light research Alloy Technology Co., LTD.	Joint venture of the group
Qujing Zhanyi District Jiecheng Logistics Co., LTD.	Associates of the group
Chambishi Copper Smelting Co., LTD.	Associates of the group
Ningxia Tianjing Shenzhou Wind Power Generation Co., LTD.	Joint venture of the group
Huozhou Coal power group Hejin Xue Hugou Coal Industry Co., LTD.	Associates of the group
Datong Coal Group Huasheng Wanjie Coal Industry Co., LTD.	Joint venture of the group
Beijing Jiia Semiconductor Materials Co., LTD.	Associates of the group

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<b>Name of related parties</b>	<b>Related Party Relationships</b>
Chalco See top Intelligent Technology Co., LTD.	Associates of the group
Chinalco Guizhou Industrial Service Co., LTD.	Associates of the group
Hong Kong xinsheng trading Co., LTD.	Associates of the group
Qinghai Haiyuan Aluminum Industry Co., LTD.	Associates of the group
Ningxia Jingneng Ningdong Power Generation Co., LTD.	Associates of the group
Huadian Ningxia Lingwu Power Generation Co., LTD.	Associates of the group
Baotou Sendu Carbon Co., LTD.	Associates of the group
Jiangsu Zhongse Ruili Industrial Co., LTD.	Associates of the group
Loudi Zhongyu New Material Co., LTD.	Joint venture of the group
Shanxi Huatuo Aluminum Co., LTD.	Associates of the group
Tianjin Junxin Lightweight Technology Co., LTD.	Associates of the group
Zhengzhou Light research Alloy Technology Co., LTD.	Joint venture of the group
Chinalco Zibo International Trade Co., LTD.	Joint venture of the group
Peking University Medical Zibo Hospital Co., LTD.	Associates of the group
Beijing Jiia Semiconductor Materials Co., LTD.	Associates of the group
Guangxi Hualei New Material Co., LTD.	Joint venture of the group
Guangxi Huayin Aluminum Industry Co., LTD.	Joint venture of the group
Guangxi Huazeng Aluminum Co., LTD.	Associates of the group
Guangxi Huazhong Building Materials Co., LTD.	Associates of the group
Hangzhou Huannuan Technology Co., LTD.	Associates of the group
Henan Huashun Tiancheng Technology Co., LTD.	Associates of the group
Huozhou Coal power Group Xingsheng Yuan Coal Industry Co., LTD.	Associates of the group
Mianxian Urban and rural Infrastructure Construction Co., LTD.	Associates of the group
Inner Mongolia Fengrong Distribution Power Co., LTD.	Associates of the group
Ningxia Tianjing Shenzhou Wind Power Generation Co., LTD.	Joint venture of the group
Qinghai Chalco Industrial Service Co., LTD.	Associates of the group
Qujing Zhanyi District Jiecheng Logistics Co., LTD.	Associates of the group
Shaanxi Provincial Power Dingbian Energy Co., LTD.	Joint venture of the group
Yunnan Kunye Construction development Co., LTD.	Associates of the group
Yunnan Simao Shanshui Copper Co., LTD.	Joint venture of the group

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(Unless otherwise specified, the notes to the financial statements are all presented in RMB)

<b>Name of related parties</b>	<b>Related Party Relationships</b>
China Merchants Products Co., LTD.	Joint venture of the group
Zhongheng Cooperation Investment Co., LTD.	Joint venture of the group
Zhongji Shanhe Technology Co., LTD.	Joint venture of the group
China Construction Aluminum New Material Co., LTD.	Associates of the group
Chinalco Industrial Service Technology Co., LTD.	Joint venture of the group
Chinalco Guizhou Industrial Service Co., LTD.	Associates of the group
Chalco Southern Aluminum (Fujian) Aluminum Structure Technology	Associates of the group
Chalco See top Intelligent Technology Co., LTD.	Associates of the group
Datong Coal Group Huasheng Wanjie Coal Industry Co., LTD.	Joint venture of the group
Guangdong Maoming Xinxiang Property Management Co., LTD.	Joint venture of the group
Guizhou Chalco Hengtai Mining Co., LTD.	Joint venture of the group
Henan Jinrui Aijie Building Materials Co., LTD.	Associates of the group
Henan Qianhai Times Energy Conservation and Environmental	Associates of the group
Henan Great Wall Logistics Co., LTD.	Associates of the group
Huadian Ningxia Lingwu Power Generation Co., LTD.	Associates of the group
Jiexiu Yuye Coal Preparation Co., LTD.	Associates of the group
Longxi Northwest aluminum bridge Welding Material Co., LTD.	Associates of the group
Luoyang Huazhong Aluminum Industry Co., LTD.	Associates of the group
Ningxia Jingneng Ningdong Power Generation Co., LTD.	Associates of the group
Shanxi Ganlin Jin Aluminum Medical Investment Co., LTD.	Associates of the group
Shanxi Gallium Huatianhe Electronic Materials Co., LTD.	Associates of the group
Shanxi Jiexiu Xinyugou Coal Industry Co., LTD.	Joint venture of the group
Taikang Haowen Construction Co., LTD.	Associates of the group
Taiyuan Medium color twelve metallurgy real estate Development Co.,	Associates of the group
Xi 'an Urban and Rural Construction Investment development Co.,	Associates of the group
Petrochina Chinalco (Beijing) Petrochemical Co., LTD.	Joint venture of the group
Chambishi Copper Smelting Co., LTD.	Associates of the group
Hong Kong xinsheng trading Co., LTD.	Associates of the group
Yunnan Suotongyun Aluminum carbon Material Co., LTD.	Associates of the group
Zhongxi Oriental permanent magnet Motor Co., LTD.	Joint venture of the group

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(Unless otherwise specified, the notes to the financial statements are all presented in RMB)

Name of related parties	Related Party Relationships
Fuzhou Jiaotou Ruimin Trading Co., LTD.	Associates of the group
Guizhou Tongye Construction and Development Co., LTD.	Associates of the group
Loudi Haocuang Development and Construction Co., LTD.	Associates of the group
Shanxi Qin Aluminum Taiyue New Material Co., LTD.	Associates of the group
Sichuan South Sichuan Rail Transit Operation Co., LTD.	Associates of the group
Yunnan Linyun Expressway Co., LTD.	Associates of the group
Yunnan Ningyong Expressway Co., LTD.	Associates of the group
China Construction Aluminum New Materials Henan Co., LTD.	Associates of the group
Zhuzhou Tianqiao Lifting Stock Co., LTD.	Associates of the group
Xining Huayue Industrial Service Co., LTD.	Joint venture of the group
Baotou Tiancheng Aluminum Co., LTD.	Associates of the group
Zhongxi (Sichuan) Rare Earth Co., LTD.	Associates of the group

**11.4 Related party transactions**

## 1. Sale of goods

Name of related parties	Current year amount	Prior year amount
Guangxi Huayin Aluminum Industry Co., Ltd.	921,626,792.72	581,423,235.00
Loudi Zhongyu New Material Co., Ltd.	79,848,039.02	205,245,254.50
Qinghai Chalco Industrial Service Co., Ltd.	70,372,824.27	
China Merchants Products Co., Ltd.	615,825,058.27	8,909,664,685.11
Guizhou Aluminum Aluminum Co., Ltd.	537,378,882.17	55,152,144.19
Guangxi Hualei New Material Co., Ltd.	5,477,904,452.71	3,975,599,350.33
Shanxi Huatuo Aluminum Co., Ltd.	36,688,480.71	4,717,966.16
Chinalco Zibo International Trade Co., Ltd.	2,796,083,363.66	1,932,556,193.17
Zhongheng Cooperation Investment Co., Ltd.	19,889,708.86	
Tianjin Junxin Lightweight Technology Co., Ltd.	14,248,676.36	
Baotou Tiancheng Aluminum Co., Ltd.		316,355,146.36
Fuzhou Jiaotou Ruimin Trading Co., Ltd.		210,340,943.76
Guangxi Huazhong Building Materials Co., Ltd.		1,694,328.32
Henan Huashun Tiancheng Technology Co., Ltd.		141,014.91

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Name of related parties	Current year amount	Prior year amount
Longxi Northwest aluminum bridge Welding Material Co., Ltd.		21,076.22
Lualaba Copper Smelting Co., Ltd.		84,905.66
Yunnan Simao Shanshui Copper Co., Ltd.		5,100,357.48
<b>Total</b>	<b>10,569,866,278.75</b>	<b>16,198,096,601.17</b>

2. Rendering of services

Name of related parties	Current year amount	Prior year amount
Guangxi Hualei New Material Co., Ltd.	112,320,206.02	119,955,468.86
Chinalco Zibo International Trade Co., Ltd.	96,427,387.78	252,346,825.81
Guangxi Huayin Aluminum Industry Co., Ltd.	38,280,279.18	50,839,649.82
Beijing Jiia Semiconductor Materials Co., Ltd.	14,480,437.36	
Datong Coal Group Huasheng Wanjie Coal Industry Co., Ltd.	4,327,500.00	12,140,573.95
Qinghai Chalco Industrial Service Co., Ltd.	2,908,029.90	
Zhengzhou Light research Alloy Technology Co., Ltd.	2,179,145.25	149,897.58
Ningxia Tianjing Shenzhou Wind Power Generation Co., Ltd.	910,100.25	
China Merchants Products Co., Ltd.	377,142.86	
Tianjin Junxin Lightweight Technology Co., Ltd.	355,820.29	
Guangxi Huazhong Building Materials Co., Ltd.	353,930.21	724,892.43
Petrochina Chinalco (Beijing) Petrochemical Co., Ltd.	169,811.32	
Zhongheng Cooperation Investment Co., Ltd.	129,766.65	
Henan Huashun Tiancheng Technology Co., Ltd.	21,918.89	
Shanxi Huatuo Aluminum Co., Ltd.	20,508.84	
Baotou Tiancheng Aluminum Co., Ltd.		7,438,448.79
Fuzhou Jiaotou Ruimin Trading Co., Ltd.		60,092,449.63
Huozhou Coal power group Hejin Xue Hugou Coal Industry		8,455,582.08
Chambishi Copper Smelting Co., Ltd.		5,563,816.57
Qujing Zhanyi District Jiecheng Logistics Co., Ltd.		11,162.24
<b>Total</b>	<b>273,261,984.80</b>	<b>517,718,767.76</b>

3. Purchase of goods

Name of related parties	Current year amount	Prior year amount
China Merchants Products Co., Ltd.	7,180,058,401.29	8,962,784,177.11
Chinalco Zibo International Trade Co., Ltd.	2,630,366,784.66	2,104,940,888.55
Loudi Zhongyu New Material Co., Ltd.	1,859,587,646.51	1,180,819,167.77
Guangxi Huayin Aluminum Industry Co., Ltd.	1,714,917,899.79	1,782,003,484.95



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<b>Name of related parties</b>	<b>Current year amount</b>	<b>Prior year amount</b>
Baotou Sendu Carbon Co., Ltd.	1,607,753,315.16	916,212,863.58
Guangxi Hualei New Material Co., Ltd.	311,619,216.00	631,233,256.08
Zhongheng Cooperation Investment Co., Ltd.	200,025,803.66	670,729,992.07
Guangxi Huazhong Building Materials Co., Ltd.	17,477,298.83	18,780,323.30
Petrochina Chinalco (Beijing) Petrochemical Co., Ltd.	11,974,008.28	10,256,420.13
Chalco See top Intelligent Technology Co., Ltd.	10,242,694.20	8,042,995.49
Henan Huashun Tiancheng Technology Co., Ltd.	8,856,467.03	
Qinghai Chalco Industrial Service Co., Ltd.	4,370,557.47	
Chinalco Guizhou Industrial Service Co., Ltd.	1,591,519.11	
Huadian Ningxia Lingwu Power Generation Co., Ltd.		224,334.91
Ningxia Jingneng Ningdong Power Generation Co., Ltd.		132,795.28
Chambishi Copper Smelting Co., Ltd.		1,567,480,646.80
Qinghai Haiyuan Aluminum Industry Co., Ltd.		8,235.00
Hong Kong xinsheng trading Co., Ltd.		1,837,269,832.14
Yunnan Simao Shanshui Copper Co., Ltd.		583,074,553.94
<b>Total</b>	<b>15,558,841,611.99</b>	<b>20,273,993,967.10</b>

4. Receiving of services

<b>Name of related parties</b>	<b>Current year amount</b>	<b>Prior year amount</b>
Guangxi Hualei New Material Co., Ltd.	777,360,796.86	
Henan Huashun Tiancheng Technology Co., Ltd.	23,063,933.79	1,550,176.99
Chalco See top Intelligent Technology Co., Ltd.	12,413,057.28	12,232,555.64
Qinghai Chalco Industrial Service Co., Ltd.	8,899,026.30	
Chinalco Guizhou Industrial Service Co., Ltd.	1,844,594.55	
Guangxi Huayin Aluminum Industry Co., Ltd.	2,385.32	99,538,004.00
Qujing Zhanyi District Jiecheng Logistics Co., Ltd.		17,139,614.79
<b>Total</b>	<b>273,261,984.80</b>	<b>517,718,767.76</b>

1. Related party transactions

(1) Accounts receivable

<b>Company name</b>	<b>Closing balance</b>	<b>Opening balance</b>
Yunnan Linyun Expressway Co., Ltd.	1,230,616,002.19	247,177,689.00
Chinalco Zibo International Trade Co., Ltd.	626,264,403.97	727,682,021.08
Yunnan Ningyong Expressway Co., Ltd.	520,041,052.60	222,300,612.94

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<b>Company name</b>	<b>Closing balance</b>	<b>Opening balance</b>
Guangxi Hualei New Material Co., Ltd.	97,345,886.64	65,334,560.78
Sichuan South Sichuan Rail Transit Operation Co., Ltd.	95,065,778.28	1,749,913.54
Guangxi Huayin Aluminum Industry Co., Ltd.	94,103,436.65	22,408,414.62
Henan Huashun Tiancheng Technology Co., Ltd.	35,301,590.06	112,429.09
Guizhou Tongye Construction and Development Co., Ltd.	22,281,772.60	22,281,772.60
Shaanxi Provincial Power Dingbian Energy Co., Ltd.	6,999,863.07	6,999,863.07
Beijing Jiia Semiconductor Materials Co., Ltd.	821,079.11	
Yunnan Simao Shanshui Copper Co., Ltd.	753,122.00	2,640,642.74
Peking University Medical Zibo Hospital Co., Ltd.	512,679.37	
Guangxi Huazhong Building Materials Co., Ltd.	303,396.80	301,900.00
Chalco See top Intelligent Technology Co., Ltd.	50,000.00	1,363,196.47
Datong Coal Group Huasheng Wanjie Coal Industry Co., Ltd.	30,000.00	30,000.00
Shanxi Huatuo Aluminum Co., Ltd.	1,036.41	6,946.93
Chinalco Guizhou Industrial Service Co., Ltd.	768.20	2,587,618.08
Fuzhou Jiaotou Ruimin Trading Co., Ltd.		9,756,860.09
Henan Jinrui Aijie Building Materials Co., Ltd.		14,175.23
Jiangsu Zhongse Ruili Industrial Co., Ltd.		2,806,649.21
Loudi Haocuang Development and Construction Co., Ltd.		27,492,200.00
Luoyang Huazhong Aluminum Industry Co., Ltd.		32,384,941.85
Ningxia Tianjing Shenzhou Wind Power Generation Co., Ltd.		745,000.00
Shanxi Qin Aluminum Taiyue New Material Co., Ltd.		500,000.00
Taiyuan Medium color twelve metallurgy real estate Development Co., Ltd.		4,560,278.82
China Construction Aluminum New Materials Henan Co., Ltd.		709,013.65
Zhuzhou Tianqiao Lifting Stock Co., Ltd.		1,687,976.75
<b>Total</b>	<b>2,730,491,867.95</b>	<b>1,403,634,676.54</b>

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(2) Advances to suppliers

Company name	Closing balance	Opening balance
Fuzhou Jiaotou Ruimin Trading Co. LTD		174,336.39
Guangxi Huayin Aluminum Industry Co., LTD	5,234.34	2,725,724.80
Henan Huashun Tiancheng Technology Co., LTD		188,513.16
Henan Great Wall Logistics Co. LTD		200,413.21
Shanxi Jiexiu Xinyugou Coal Industry Co. LTD		19,988,174.44
Xining Huayue Industrial Service Co., LTD		1,965,375.86
Yunnan Simao Shanshui Copper Co., LTD		65,000,000.00
China Merchants Products Co. LTD	6,520,386.20	
Zhongheng Cooperation Investment Co., LTD		630,453.84
Zhongji Shanhe Technology Co. LTD	10,948,477.42	2,126,269.60
Chinalco Zibo International Trade Co., LTD	129,165,581.03	30,670,083.68
<b>Total</b>	<b>146,639,678.99</b>	<b>123,669,344.98</b>

(3) Account payables

Company name	Closing balance	Opening balance
Chinalco Zibo International Trade Co., Ltd.	205,803,991.77	561,508,239.81
China Merchants Products Co., Ltd.	26,175,587.97	
Yunnan Suotongyun Aluminum carbon Material Co., Ltd.	19,669,262.00	
Chinalco Industrial Service Technology Co., Ltd.	4,737,147.77	
Guangxi Huazhong Building Materials Co., Ltd.	3,252,002.25	4,151,941.22
Chalco See top Intelligent Technology Co., Ltd.	3,240,418.74	3,253,318.74
Chinalco Guizhou Industrial Service Co., Ltd.	173,097.84	
Zhongxi Oriental permanent magnet Motor Co., Ltd.	115,422.65	
Jiangsu Zhongse Ruili Industrial Co., Ltd.	86,495.69	
Guangxi Hualei New Material Co., Ltd.	56,202.00	
Chambishi Copper Smelting Co., Ltd.		19,836,120.65
Qujing Zhanyi District Jiecheng Logistics Co., Ltd.		11,473,294.99
Hong Kong xinsheng trading Co., Ltd.		85,242,954.71
Yunnan Simao Shanshui Copper Co., Ltd.		7,336,759.91

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<b>Company name</b>	<b>Closing balance</b>	<b>Opening balance</b>
<b>Total</b>	<b>263,309,628.68</b>	<b>692,802,630.03</b>

(4) Contract liabilities

<b>Company name</b>	<b>Closing balance</b>	<b>Opening balance</b>
Tianjin Junxin Lightweight Technology Co., Ltd.	26,489,282.29	
Zhongxi (Sichuan) Rare Earth Co., Ltd.	5,500,000.00	
Loudi Zhongyu New Material Co., Ltd.	403,811.33	73,600.18
Zhengzhou Light research Alloy Technology Co., Ltd.	109,659.80	171,178.76
Baotou Sendu Carbon Co., Ltd.	89,304.51	
Shanxi Huatuo Aluminum Co., Ltd.	49,999.98	63,301.30
Chinalco Zibo International Trade Co., Ltd.	21,594.25	274,257.99
Jiangsu Zhongse Ruili Industrial Co., Ltd.	9,142.01	
Baotou Tiancheng Aluminum Co., Ltd.		15,500.55
Henan Jinrui Aijie Building Materials Co., Ltd.		40,010.00
<b>Total</b>	<b>32,672,794.17</b>	<b>637,848.78</b>

(5) Other receivables

<b>Company name</b>	<b>Closing balance</b>	<b>Opening balance</b>
Baotou Sendu Carbon Co., Ltd.	148,187.48	
Datong Coal Group Huasheng Wanjie Coal Industry Co., Ltd.	45,619,855.74	61,032,705.74
Guangdong Maoming Xinxiang Property Management Co., Ltd.		7,449,125.92
Guangxi Hualei New Material Co., Ltd.	10,002,798.14	5,377,208.20
Guangxi Huayin Aluminum Industry Co., Ltd.	1,235,200.00	1,215,400.00
Guangxi Huazhong Building Materials Co., Ltd.	9,558.84	
Guizhou Chalco Hengtai Mining Co., Ltd.	166,114,178.93	168,954,178.93
Hangzhou Huannuan Technology Co., Ltd.		391,192.24
Henan Jinrui Aijie Building Materials Co., Ltd.		427,444.55
Henan Qianhai Times Energy Conservation and Environmental	21,820,381.60	
Henan Great Wall Logistics Co., Ltd.		3,090,995.04
Huadian Ningxia Lingwu Power Generation Co., Ltd.	226,585,286.20	

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<b>Company name</b>	<b>Closing balance</b>	<b>Opening balance</b>
Huozhou Coal power Group Xingsheng Yuan Coal Industry Co.,	220,934.65	
Jiangsu Zhongse Ruili Industrial Co., Ltd.		85,000.00
Jiexiu Yuye Coal Preparation Co., Ltd.		15,592,199.54
Longxi Northwest aluminum bridge Welding Material Co., Ltd.		76,457.17
Luoyang Huazhong Aluminum Industry Co., Ltd.		300,000.00
Ningxia Jingneng Ningdong Power Generation Co., Ltd.	18,914,377.88	
Ningxia Tianjing Shenzhou Wind Power Generation Co., Ltd.	6,800,000.00	
Shanxi Ganlin Jin Aluminum Medical Investment Co., Ltd.		3,240.00
Shanxi Gallium Huatianhe Electronic Materials Co., Ltd.		1,358,659.12
Shanxi Jiexiu Xinyugou Coal Industry Co., Ltd.	1,515,394,020.68	1,463,871,177.42
Shaanxi Provincial Power Dingbian Energy Co., Ltd.	1,831,980.60	1,831,980.60
Taikang Haowen Construction Co., Ltd.	255,300.00	
Taiyuan Medium color twelve metallurgy real estate Development		20,414,897.05
Tianjin Junxin Lightweight Technology Co., Ltd.	20,085,231.08	
Xi 'an Urban and Rural Construction Investment development Co.,		53,035,595.14
Zhongji Shanhe Technology Co., Ltd.	1,138,400.00	57,900.00
Chinalco Guizhou Industrial Service Co., Ltd.		33,521,665.14
Chalco Southern Aluminum (Fujian) Aluminum Structure	1,200.00	1,238.00
Petrochina Chinalco (Beijing) Petrochemical Co., Ltd.		788,340.98
<b>Total</b>	<b>2,036,176,891.82</b>	<b>1,838,876,600.78</b>

(6) Other payables

<b>Company name</b>	<b>Closing balance</b>	<b>Opening balance</b>
Peking University Medical Zibo Hospital Co., Ltd.		4,616,590.09
Beijing Jiia Semiconductor Materials Co., Ltd.	431,000.00	
Guangxi Hualei New Material Co., Ltd.	260,000.00	
Guangxi Huayin Aluminum Industry Co., Ltd.	1,608,988.45	793,942.88
Guangxi Huazeng Aluminum Co., Ltd.		2,000,000.00
Guangxi Huazhong Building Materials Co., Ltd.	1,000,000.00	1,000,000.00

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<b>Company name</b>	<b>Closing balance</b>	<b>Opening balance</b>
Hangzhou Huannuan Technology Co., Ltd.		1,768,000.00
Henan Huashun Tiancheng Technology Co., Ltd.	88,681.12	
Huozhou Coal power Group Xingsheng Yuan Coal Industry Co.,		18,000,000.00
Mianxian Urban and rural Infrastructure Construction Co., Ltd.		1,000,000.00
Inner Mongolia Fengrong Distribution Power Co., Ltd.	135,000.00	
Ningxia Tianjing Shenzhou Wind Power Generation Co., Ltd.		3,096,879.53
Qinghai Chalco Industrial Service Co., Ltd.	177,800.00	
Qujing Zhanyi District Jiecheng Logistics Co., Ltd.		8,200.50
Shanxi Huatuo Aluminum Co., Ltd.		1,036.31
Shaanxi Provincial Power Dingbian Energy Co., Ltd.		20,000.00
Tianjin Junxin Lightweight Technology Co., Ltd.	8,028,668.24	
Yunnan Kunye Construction development Co., Ltd.		62,600.00
Yunnan Simao Shanshui Copper Co., Ltd.		27,670,000.00
China Merchants Products Co., Ltd.	2,000,000.00	4,000,000.00
Zhengzhou Light research Alloy Technology Co., Ltd.		28,952.00
Zhongheng Cooperation Investment Co., Ltd.	164,155.69	
Zhongji Shanhe Technology Co., Ltd.		235,000.00
China Construction Aluminum New Material Co., Ltd.	5,253,927.35	
Chinalco Industrial Service Technology Co., Ltd.		1,800,000.00
Chinalco Guizhou Industrial Service Co., Ltd.	388,764.00	
Chalco Southern Aluminum (Fujian) Aluminum Structure Technology Development Co., Ltd.		18,797.00
Chalco See top Intelligent Technology Co., Ltd.	16,761,513.15	3,423,187.46
<b>Total</b>	<b>36,298,498.00</b>	<b>69,543,185.77</b>

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(Unless otherwise specified, the notes to the financial statements are all presented in RMB)

**Note 12 Notes to important items in the parent company's financial statement**

1. Accounts Receivable

Items	Closing balance	Opening balance
Interests receivable		38,545,546.26
Dividends receivable	60,258,544.09	63,480,793.10
Other receivables	972,560,533.50	1,361,538,420.66
<b>Total</b>	<b>1,032,819,077.59</b>	<b>1,463,564,760.02</b>

(1) Interests receivable

Items	Closing balance	Opening balance
Term deposits		
Entrusted loans		38,545,546.26
Bond investments		
Others		
<b>Total</b>		<b>38,545,546.26</b>

(2) Dividends receivable

Items	Opening balance	Increase in current year	Decrease in current year	Closing balance	Reason for uncollected amounts	Any impairment loss incurred and corresponding basis
<b>Dividends receivable more than one year</b>	63,480,793.10		3,222,249.01	60,258,544.09		
Including: 1. Beijing National Tune China Aluminum Copper Industry Development Fund (Limited Partnership)	3,222,249.01		3,222,249.01		Financial strain	No
2. Southwest Aluminum (Group) Co., Ltd.	13,820,930.50			13,820,930.50	Financial strain	No
3. Chinalco Ruimin Co., Ltd.	5,996,809.11			5,996,809.11	Financial strain	No
4. Chinalco Southwest Aluminum Strip Co., Ltd.	33,542,056.90			33,542,056.90	Financial strain	No
5. Chinalco Luoyang Copper Industry Co., Ltd.	6,898,747.58			6,898,747.58	Financial strain	No

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Items	Opening balance	Increase in current year	Decrease in current year	Closing balance	Reason for uncollected amounts	Any impairment loss incurred and corresponding basis
<b>Total</b>	63,480,793.10		3,222,249.01	60,258,544.09		

(3) Other Receivables

1) Disclose other receivables according to the method of bad debt provision

Category	Closing balance				
	Carrying amount		Bad debt provision		Book value
	Amount	Proportion (%)	Amount	Proportion (%)	
Other receivables set aside allowance for bad debts on an individual basis	171,947,225.91	15.02	171,947,225.91	100.00	
Other receivables of bad debt provision based on combination of credit risk characteristics	972,560,533.50	84.98			972,560,533.50
<b>Total</b>	<b>1,144,507,759.41</b>	<b>100.00</b>	<b>171,947,225.91</b>		<b>972,560,533.50</b>

(Continued)

Category	Opening balance				
	Carrying amount		Bad debt provision		Book value
	Amount	Proportion (%)	Amount	Proportion (%)	
Other receivables set aside allowance for bad debts on an individual basis	162,148,025.87	10.64	162,148,025.87	100.00	
Other receivables of bad debt provision based on combination of credit risk characteristics	1,361,538,420.66	89.36			1,361,538,420.66
<b>Total</b>	<b>1,523,686,446.53</b>	<b>100.00</b>	<b>162,148,025.87</b>		<b>1,361,538,420.66</b>

2) Disclose other receivables according to the age of the account

Aging	Closing balance	Opening balance
Within 1 year (including 1 year)	34,095,881.48	106,084,870.64
1-2 years	91,602,357.07	228,076,753.54
2-3 years	10,380,547.43	511,043,787.60
3-4 years	335,762,498.68	113,284,223.83



**ALUMINUM CORPORATION OF CHINA (Consolidated) Notes to the financial statements for the year of 2021**

1 January 2021 to 31 December 2021

(Unless otherwise specified, the notes to the financial statements are all presented in RMB)

4-5 years	110,334,531.34	51,264,795.09
More than 5 years	562,331,943.41	513,932,015.83
<b>Subtotal</b>	<b>1,144,507,759.41</b>	<b>1,523,686,446.53</b>
Less: bad debt provision	171,947,225.91	162,148,025.87
<b>Total</b>	<b>972,560,533.50</b>	<b>1,361,538,420.66</b>

3) Other receivables separately prepared for bad debts at the end of the year

Debtor name	Carrying amount	Bad debt provision	Proportion (%)	Reason for recognition
Shanxi Carbon Plant	127,659,610.86	127,659,610.86	100.00	Expect of uncollectible
Chalco Chengdu Aluminum Co., Ltd.	16,163,031.04	16,163,031.04	100.00	Expect of uncollectible
China Gold Earth Resources Technology Co., Ltd.	9,600,000.00	9,600,000.00	100.00	Expect of uncollectible
Kellogg Management Consulting	7,678,389.87	7,678,389.87	100.00	Expect of uncollectible
Jiangxi Rare Earth Hi-tech Co., Ltd.	7,000,000.00	7,000,000.00	100.00	Expect of uncollectible
Yongji Huasheng Employment Service Co., Ltd.	2,120,810.17	2,120,810.17	100.00	Expect of uncollectible
Fushun Titanium Industry Co., Ltd.	1,725,383.97	1,725,383.97	100.00	Expect of uncollectible
<b>Total</b>	<b>171,947,225.91</b>	<b>171,947,225.91</b>		

4) Other Receivables that are Collectively Assessed for Impairment as in a Group of Receivables of Shared Credit Risk Characteristics

Portfolio name	Closing balance			Opening balance		
	Amount	Proportion (%)	Bad debt provision	Amount	Proportion (%)	Bad debt provision
Risk-free portfolio	972,560,533.50			1,361,538,420.66	972,560,533.50	
<b>Total</b>	<b>972,560,533.50</b>			<b>1,361,538,420.66</b>	<b>972,560,533.50</b>	

**ALUMINUM CORPORATION OF CHINA (Consolidated) Notes to the financial statements for the year of 2021**

1 January 2021 to 31 December 2021

(Unless otherwise specified, the notes to the financial statements are all presented in RMB)

5) Other accounts receivable bad debt provision

Bad debt provision	Stage 1	Stage 2	Stage 3	Total
	Expected credit loss in the next 12 months	Expected credit loss for the entire duration (no credit impairment occurred)	Expected credit loss for the entire duration (credit impairment has occurred)	
Opening balance			162,148,025.87	162,148,025.87
The balance at the beginning of this year				
-Transfer to the second stage				
-Transfer to the third stage				
- Return to the second stage				
-Return to the first stage				
Accrual in current period		9,799,200.04		9,799,200.04
Reversal in current period				
Write off in Current period				
Recognition in current period				
Other changes				
<b>Closing balance</b>		<b>9,799,200.04</b>	<b>162,148,025.87</b>	<b>171,947,225.91</b>

6) The book balance of other receivables changes as follows

Gross carrying amount	Stage 1	Stage 2	Stage 3	Total
	Expected credit loss in the next 12 months	Expected credit loss for the entire duration (no credit impairment occurred)	Expected credit loss for the entire duration (credit impairment has occurred)	
Opening balance	1,361,538,420.66		162,148,025.87	1,523,686,446.53
The balance at the beginning of this year				
-Transfer to the second	-9,799,200.04	9,799,200.04		

**ALUMINUM CORPORATION OF CHINA (Consolidated) Notes to the financial statements for the year of 2021**

1 January 2021 to 31 December 2021

(Unless otherwise specified, the notes to the financial statements are all presented in RMB)

Gross carrying amount	Stage 1	Stage 2	Stage 3	Total
	Expected credit loss in the next 12 months	Expected credit loss for the entire duration (no credit impairment occurred)	Expected credit loss for the entire duration (credit impairment has occurred)	
stage				
-Transfer to the third stage				
- Return to the second stage				
-Return to the first stage				
Increase in current year	267,232,779.01			267,232,779.01
Current year Termination recognition	646,411,466.13			646,411,466.13
Other changes				
<b>Closing balance</b>	<b>972,560,533.50</b>	<b>9,799,200.04</b>	<b>162,148,025.87</b>	<b>1,144,507,759.41</b>

7) Top five debtors according to closing balances

Debtor name	Nature of receivables	Gross carrying amount	Aging	Proportion of total other receivables (%)	Allowance for doubtful accounts
Chinalco Asset Holding Company	current money	313,090,080.00	3-4 years	27.36	
Shanxi Carbon Plant	current money	127,659,610.86	More than 5 years	11.15	127,659,610.86
Chalco Shanxi Aluminum Co., Ltd.	current money	96,115,277.00	More than 5 years	8.40	
Guizhou Aluminium Works Co., Ltd.	current money	75,528,455.23	4-5 years, more than 5 years	6.60	
Northwest Aluminum Industry Co., Ltd.	current money	67,215,038.33	1-3 years, 4-5 years, more than 5 year	5.87	
<b>Total</b>		<b>679,608,461.42</b>		<b>59.38</b>	<b>127,659,610.86</b>

**ALUMINUM CORPORATION OF CHINA (Consolidated) Notes to the financial statements for the year of 2021**

1 January 2021 to 31 December 2021

(Unless otherwise specified, the notes to the financial statements are all presented in RMB)

2. Long-term Equity Investments

Items	Opening balance	Increase in current year	Decrease in current year	Closing balance
Investments in subsidiaries	181,886,759,315.77	3,141,521,280.06	44,270,645.80	184,984,009,950.03
Investments in joint ventures				
Investments in associates	1,117,394,591.37	33,926,170.27	855,962,136.37	295,358,625.27
<b>Subtotal</b>	183,004,153,907.14	3,175,447,450.33	900,232,782.17	185,279,368,575.30
Less: Impairment loss for long-term equity investments	1.00	11,853,000.00		11,853,001.00
<b>Total</b>	183,004,153,906.14	3,163,594,450.33	900,232,782.17	185,267,515,574.30

3. Operating Revenue and Operating Costs

Items	Current year		Prior year	
	Revenue	Costs	Revenue	Costs
Subtotal of other business	259,350,196.79		227,599,546.13	
Income from guarantees	259,350,196.79		227,599,546.13	
<b>Total</b>	<b>259,350,196.79</b>		<b>227,599,546.13</b>	

4. Investment income

Sources of investment income	Current year	Prior year
Income from long-term equity investments under equity method	13,596,170.27	17,319,039.52
Income from disposal of long-term equity investments	272,758,808.98	-465,935,271.27
Investment income during the holding period of a trading financial asset		
Investment income of other equity instruments during investment holding period	98,153,969.71	
Income from available-for-sale financial assets		24,243,049.38
Income from long-term equity investments under cost method and Others	2,815,041,417.72	1,806,456,985.85
<b>Total</b>	<b>3,199,550,366.68</b>	<b>1,382,083,803.48</b>

**ALUMINUM CORPORATION OF CHINA (Consolidated) Notes to the financial statements for the year of 2021**

1 January 2021 to 31 December 2021

(Unless otherwise specified, the notes to the financial statements are all presented in RMB)

## 5. Parent company cash flow statement

## (1) Supplementary information of cash flow statement

Items	Current year	Prior year
<b>1. To reconcile net profit to cash flows from operating activities:</b>		
Net profit	-358,148,083.12	-452,701,586.91
Add: Asset Impairment losses	11,853,000.00	
Credit impairment losses	9,799,200.04	
Depreciations of fixed assets, oil and gas assets, and bearer biological assets	1,267,975.86	1,135,689.82
Depreciation of use-right assets		
Amortizations of intangible assets	36,906,851.11	819,212.20
Amortizations of long-term prepaid expenses		
Losses on disposal of fixed assets, intangible assets and other long-term assets (gain expressed with "-")	193,008.35	33,378.17
Losses on disposal of fixed assets (gain expressed with "-")		-2,078.00
Losses on changes in fair value (gain expressed with "-")		
Financial expenses (gain expressed with "-")	3,434,578,125.82	3,674,221,042.54
Investment losses (gain expressed with "-")	-3,199,550,366.68	-1,382,083,803.48
Decrease in deferred tax assets (increase expressed with "-")		
Increase in deferred tax liabilities (decrease expressed with "-")		
Decrease in inventories (increase expressed with "-")		
Decrease in operating receivables (increase expressed with "-")	430,730,894.32	-128,563,519.97
Increase in operating payables (decrease expressed with "-")	1,023,994,632.17	1,016,185,693.47
Others		
Net cash flows from operating activities	1,391,625,237.87	2,729,044,027.84
<b>2. Significant investing and financing activities that do not involve cash receipts and payments</b>		
Debts converted to capital		
Convertible debts due within one year		
Fixed assets acquired in under finance leases		

**ALUMINUM CORPORATION OF CHINA (Consolidated) Notes to the financial statements for the year of 2021**

1 January 2021 to 31 December 2021

(Unless otherwise specified, the notes to the financial statements are all presented in RMB)

Items	Current year	Prior year
<b>3.Net changes in cash and cash equivalents</b>		
Closing balance of cash	12,559,681,566.18	10,067,723,796.87
Less: Opening balance of cash	10,067,723,796.87	11,178,190,991.10
Add: Closing balance of cash equivalents		
Less: Opening balance of cash equivalents		
Net increase in cash and cash equivalents	2,491,957,769.31	-1,110,467,194.23

**(2) Cash and cash equivalents**

Items	Current year	Prior year
Cash	12,559,681,566.18	10,067,723,796.87
Including: Cash on hand	1,680.00	91,980.24
Bank deposits that are available for payment at any time	12,559,669,886.18	10,032,117,271.15
Other monetary fund that are available for payment at any time	10,000.00	35,514,545.48
Demand deposits in central bank that are available for payment at any time		
Deposits in banks and other financial institutions		
Loans to banks and other financial institutions		
Cash equivalents		
Including: Bond investments due within three months		
Closing balance of cash and cash equivalents	12,559,681,566.18	10,067,723,796.87

**Note 13 Other information required for disclosure according to related accounting standards**

Nothing..

**Note 14 Approval of financial statements**

The financial statements have been approved by the board of directors on 28 April 2022.

证书序号: 0014624

# 说明

- 1、《会计师事务所执业证书》是证明持有人经财政部门依法审批，准予执行注册会计师法定业务的凭证。
- 2、《会计师事务所执业证书》记载事项发生变动的，应当向财政部门申请换发。
- 3、《会计师事务所执业证书》不得伪造、涂改、出租、出借、转让。
- 4、会计师事务所终止或执业许可注销的，应当向财政部门交回《会计师事务所执业证书》。

会计师事务所

# 执业证书



名称: 信永中和会计师事务所(特殊普通合伙)

首席合伙人: 谭小青

主任会计师:

经营场所: 北京市东城区朝阳门北大街8号富华大厦A座8层

组织形式: 特殊普通合伙

执业证书编号: 11010136

批准执业文号: 京财会许可[2011]0056号

批准执业日期: 2011年07月07日



发证机关: 北京市财政局

中华人民共和国财政部制



# 营业执照

统一社会信用代码

91110101592354581W



(副本) (3-1)

名称 信永中和会计师事务所 (特殊普通合伙)

类型 特殊普通合伙企业

负责人 张克, 叶韶勋, 廖仁荣, 李咏英, 谭小露

经营范围 注册会计师事务所 (特殊普通合伙) 的经营范围

成立日期 2012年03月02日

合伙期限 2012年03月02日 至 2042年03月01日

主要经营场所 北京市东城区朝阳门北大街8号富华大厦A座8层

审查企业会计报表, 出具审计报告; 验证企业资本, 出具验资报告; 办理企业合并、分立、清算事宜中的审计业务, 出具有关报告; 其他会计业务。代理记账; 税务咨询; 税务申报; 资产评估; 财务顾问; 经济鉴证业务; 法律、法规规定的其他业务。 (依法须经批准的项目, 经相关部门批准后方可开展经营活动)



登记机关

2022年03月04日



年度检验合格  
Annual Renewal Register

本证书继续有效。此  
This certificate is valid for another year after  
this renewal.



姓名: 郭勇  
注册号: 410724197707310019

2013年3月20日

年度检验合格  
Annual Renewal Register

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This certificate is valid for another year after  
this renewal.



2010年11月



姓名: 郭勇  
Sex: 男  
出生日期: 1977-07-31  
工作单位: 新乡市中汇会计师事务所有限责任公司  
身份证号码: 410724197707310019



注册会计师工作单位变更事项登记  
Registration of the Change of Working Unit by a CPA

同意调入  
Agree to be taken into transferred to



同意调入  
Agree to be taken into transferred to



免予注册(特别)

2019.12.23 11:10:57

注册会计师协会(特别) 2019.12.23  
一、注册会计师协会(特别) 2019.12.23  
二、注册会计师协会(特别) 2019.12.23  
三、注册会计师协会(特别) 2019.12.23  
四、注册会计师协会(特别) 2019.12.23

NOTES

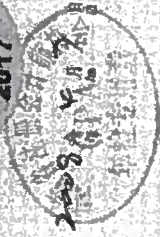
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No. of Certificate: 41074000390066

批准注册协会:  
Authorized Institution of CPAs: 河南省注册会计师协会

发证日期:  
Date of Issue: 2007年09月25日





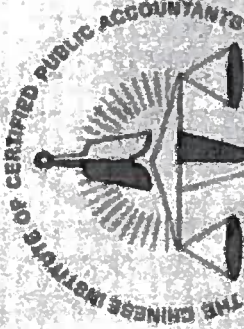
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姓名: 董其彬  
身份证号: 110101301666

年 月 日  
年 月 日



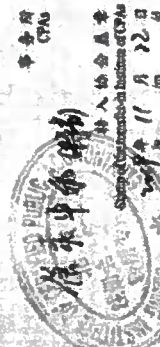
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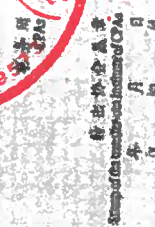
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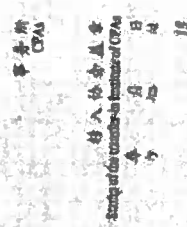
证书编号: 110101301666  
No. of Certificate  
批准注册协会: 北京注册会计师协会  
Authorizing Institute of CPA  
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Date of Changeover

注册会计师工作单位变更事项登记  
Registration of the Change of Working Unit by a CPA

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姓名: 董其彬

性别: 男

出生日期: 1981-03-04

工作单位: 瑞华会计师事务所(特殊普通合伙)

身份证号码: 210623198103045790

